AN ARGUS SPECIALIST PUBLICATION

HOME Computing WEEKLY

No. 89
Nov 20-26, 1984
45p

Late start for CBS

CBS has moved into the UK software market with the release of a range of eight titles — only just in time for Christmas.

The initial range will be available from the end of November, and run on the Commodore only. Both disc and cassette versions will be packaged in disc-sized boxes, with striking neon-style artwork.

The games are written by Epyx, an American company which had a UK hit with Summer Games, licensed by CBS to Quicksilva. Brian Hyams, CBS software manager,

Continued on page 5

M & S trial run

Along with underwear and weekly provisions, you can now pick up a software pack from Marks and Spencer in selected stores nationwide.

Fifteen shops will be stocking a range of three packs, at £6.99. Each pack contains two cassettes and comes complete with a softback book giving you hints and tips on strategy for games, and instructions for utilities.

The project is trial run to test the market, and the initial range will be of three packages: Start to Program, written by Triptych Publishing, Games Pack from Visions and Silversoft, and Games Maker by Quicksilva.

Continued on page 5

CBM 64 word quiz
So you think you know it all?

Reviews for:
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Touchmaster put to the test

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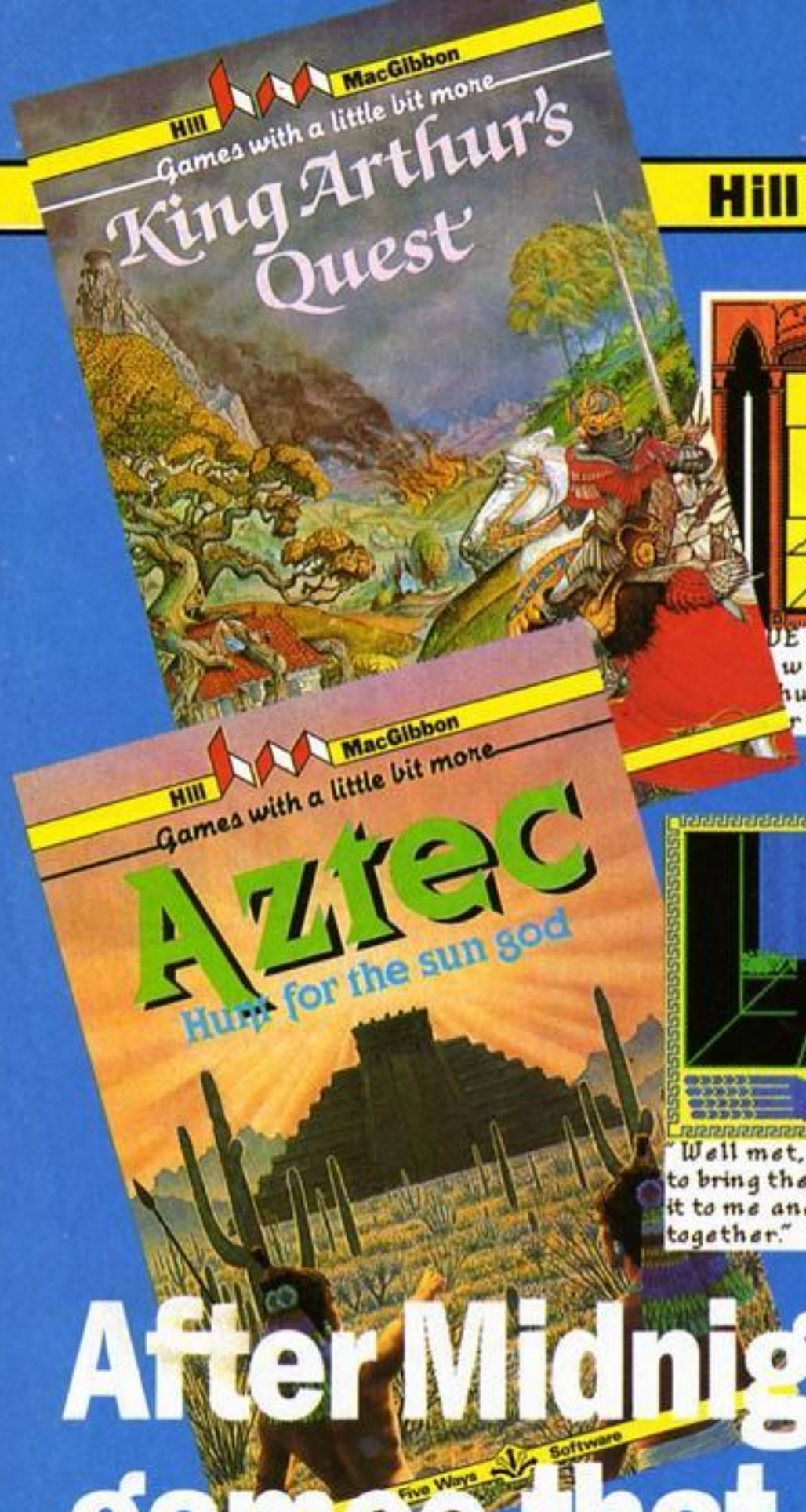

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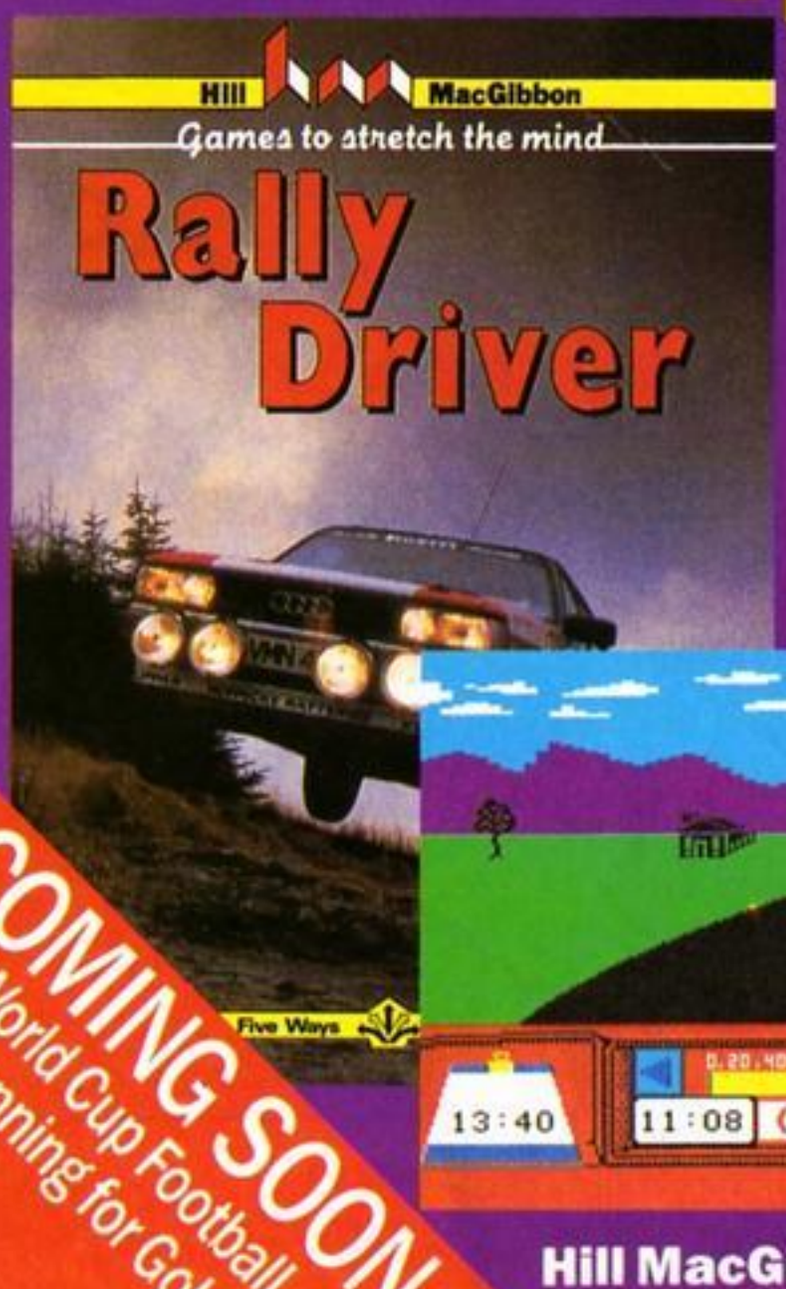

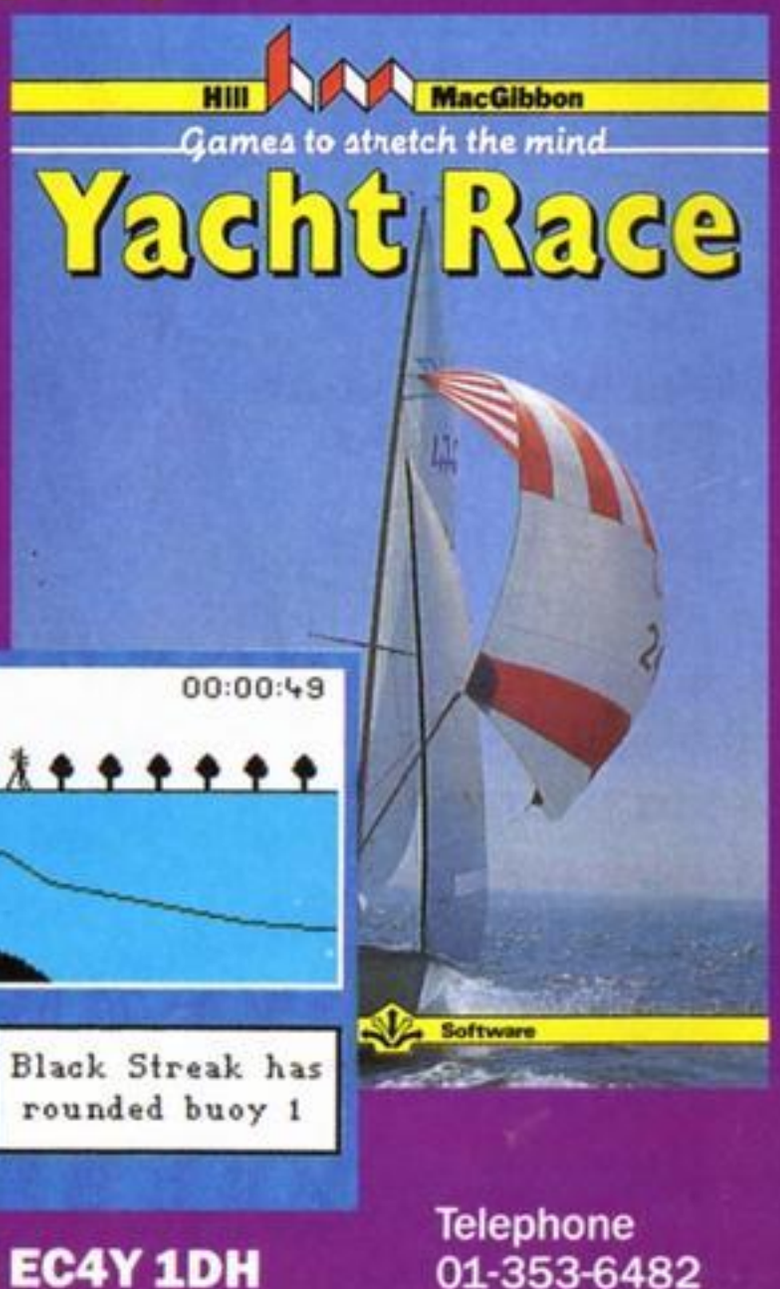

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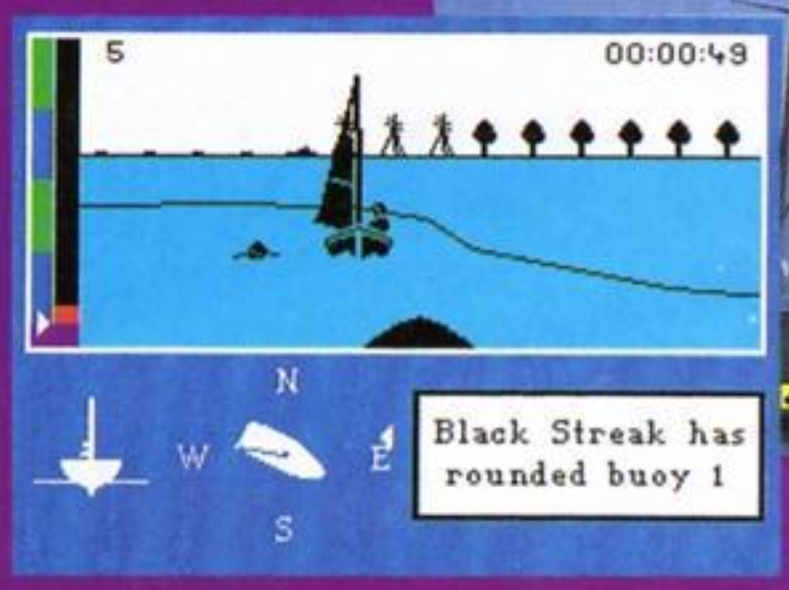

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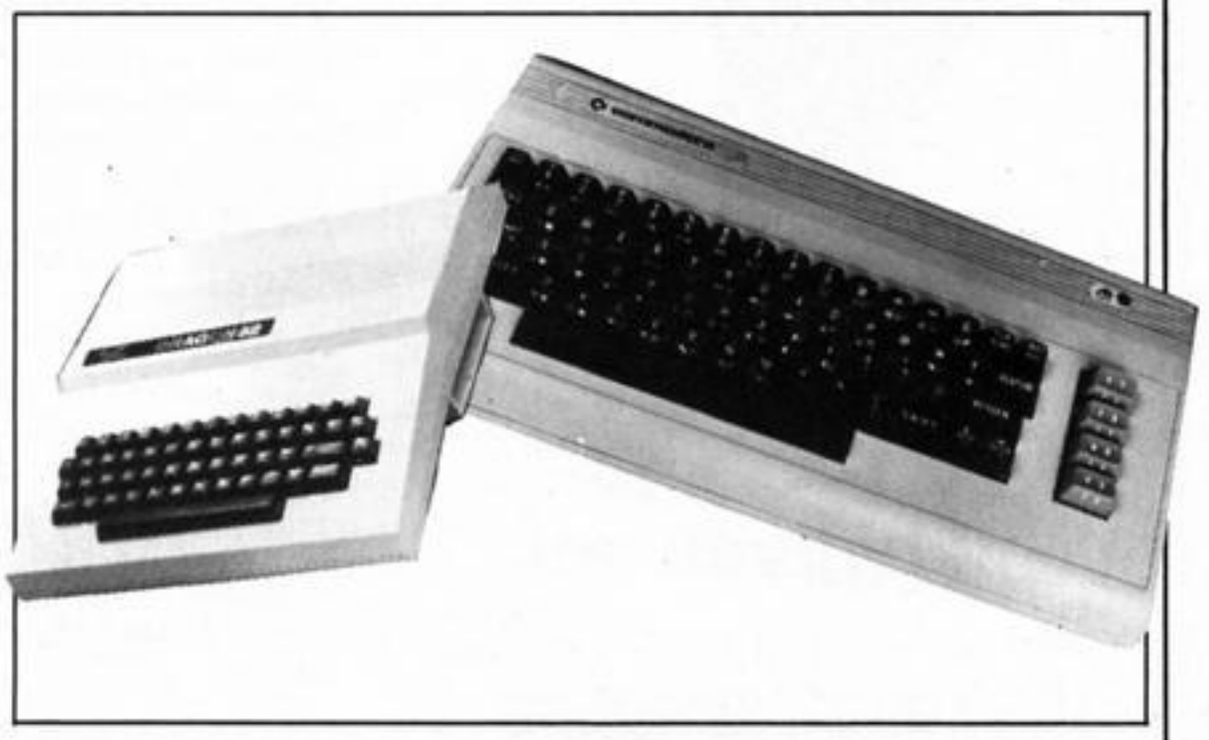
HOME COMPUTING WEEKLY
BRITAIN'S BRIGHTEST



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THE INDEPENDENT HOME-MICRO NEWSLETTER

★ what you get is . . .

LIVELY, PROVOCATIVE AND COMPREHENSIVE INFORMATION, MONTHLY. WRITTEN IN PLAIN ENGLISH AND NEVER DULL, **HOME MICRO** KEEPS YOU IN TOUCH WITH EVERYTHING THAT'S HAPPENING IN THE FAST MOVING WORLD OF HOME MICRO COMPUTERS. PLUS IT ENTITLES YOU TO **FREE** MEMBERSHIP OF COPS.

★ join the cops

The Computer Owners Protection Service is the only service of its kind anywhere in the world. As a pioneer owner of a home computer you have already created dozens of millionaires. NOW on your behalf COPS will investigate all members' complaints concerning software, hardware, peripherals, publications — anything! And where we find inadequacies, if we don't get your money back WE WILL PUBLISH THE FULL DETAILS IN **HOME MICRO.**

★ SOFTWARE

We print a monthly and unique categorised software 'hit list' so that whether you're an 'adventure', 'arcade' or 'strategy' games player, you'll know which of your type of game is really the best seller. PLUS we print a special NON-GAMES 'hit list' — WE CARRY NO TRADE ADVERTISING, and all our views and reviews are independent and unbiased.

★ GOSSIP AND RUMOURS

Nowhere will you find more about who's doing what to whom, success, pending success or failure. Also if you don't know what Sir Clive's nickname was at school or that the new President of Atari was once a New York cabbie; the **Home Micro** Diary Page tells all.

★ HARDWARE

We are **not** a technical journal. BUT every month we print an 'easy to read' chart that gives you everything you need to know about . . . what's new, what it does, where to get it and how much. Plus, we offer our own short comments on value and usability. Everything from complete computers to carrying cases is covered.

★ Christmas offer

Home Micro makes a great gift. If you fill in the form below but also tick the box, we will send you a silver-edged 'members' card to be given away on Christmas Day.

★ YOUR LETTERS

You write them — we'll print them. Be as critical and hard-hitting as you like. remember as a member of **Home Micro** and **COPS**, you carry real 'clout'. Write NOW.

★ TECHNICAL BREAKTHROUGHS

As a computer owner you owe it to yourself to keep abreast in this new technological world. **Home Micro** will not only keep you right up to date, but we will also advise you on how NOT to spend **your** money on obsolete equipment.

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★ A LETTER FROM SIR CLIVE

How would you like to receive a personal monthly letter from such eminent personalities as Sir Clive Sinclair? Every month we invite such people to write to our members giving their views as to how they see the future of the home micro developing

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the sum of £12.00 on 15 February 1985 and thereafter £17.50 on the same date each year until countermanded by me.

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M & S

Front front page

the project is a success, we'll look at other machines!"

The software is packaged in an open video-style box, with clear plastic film protecting the cassettes and book. The first three releases are designed for family interest and to appeal to beginners as well as enthusiasts.

Start to Program enables you to experiment with shapes, colours and graphics, with an adventure game which you can rewrite. Fearless Frank and Frozen Penguin are the two arcade games which make up Games Pack, and the booklet accompanying the games gives you hints on how best to play the games.

One cassette of Games Maker contains eight sample games, which you can alter as you like, while the second cassette is blank so that you can store the games you create. The 48-page guide is illustrated and in full colour.

Computer software is available from Marks and Spencer in Belfast, Birmingham, Brent Cross, Cardiff, Croydon, Glasgow, Kingston, Leeds, Lincoln, Manchester, Marble Arch, Newcastle, Oxford Circus, Reading and Yeovil. In-store videos demonstrating excerpts from the games will be on show in certain branches.

CBS

From front page

regretted the fact that CBS had moved into the software market too late to release Summer Games in the UK.

"It's just one of those things," he said. "Obviously we would have wanted to release Summer Games under our own label, but we weren't in a position to put it on the market place at that stage. But we were heavily involved with the game."

Commenting on CBS's late entry into the software market, Mr Hyams said: "We think it's better to make a release before Christmas than not at all," he said. "Timing has been the enemy for us: a decision was made by CBS Software with CBS Records for us to move in to the market over here, but we weren't asked to look at the situation until September."

The first eight games will be followed by monthly releases, according to Mr Hyams. The company has two American sources of software: Epyx and CBS Software, which has brought out a number of educational games, some based around characters such as the Sesame St gang.

"We would like to alternate our releases," said Mr Hyams. "We will be releasing Epyx games one month, then educational activity games the next."

CBS will be studying the success of each game, and then making a decision in the new year which games to convert for Spectrum, and BBC. "We'd be delighted to release on the Spectrum," said Mr Hyams. "It really depends on how well each game does. Impossible Mission is attracting a lot of attention, of course we'll be pleased if it's a hit. We think all these games are good."

Impossible Mission involves you as Agent 4125. Your mission is to reach the control centre of a mad scientist, who is thretening the world with nuclear annihilation. Human-seeking robots endanger your life and your must somersault over them.

Other titles include Breakdance, Pit Stop, Temple of Apshai, Silicon Warrior, Jumpman, Lunar Outpost and Dragonriders of Pern.

CBS Software, Ashbrook Hse, Rathbone Pl, London W1

Castle of adventure

Castle Blackstar is the name of CDS's latest adventure licensed from SCR Adventures. Available for the Spectrum and Dragon, with BBC, Commodore and Amstrad versions to follow, this game is the first part of a trilogy, The Artemis Quests.

You are commanded by the goddess Artemis to retrieve an important orb and you must locate it in the castle dungeons. This is a text-only adventure, and you have more than 200 words in your vocabulary.

Price: £6.95

CDS, Silver Hse, Silver St, Doncaster, S Yorks DN1 1HL

Ocean — TV stars

Ocean, based in Manchester, features in a documentary to be shown on BBC 2 on December 13th, at 8 p.m. The series Commercial Breaks has been following the progress of entrepreneurs in various fields.

In May the documentary team began work on Imagine, the Liverpool software house which collapsed this summer. Attention was switched to Ocean and the programming and production of Hunchback II.

Whilst the documentary was being filmed, Ocean acquired a large portion of Imagine, and the events leading up to this acquisition can be seen on Commercial Breaks.

You can also see how a computer game is made and marketed, and eventually arrives on the shelves.

Vampire killer

Track down Dracula and destroy him, using the traditional means, in Vampire Killer from Scorpio Gamesworld.

At £1.99, this arcade adventure is available for Spectrum and Amstrad. Scorpio Gamesworld promises that if you succeed at the top level of difficulty, and answer four questions correctly, you could win £100-worth of software.

Scorpio Gamesworld, 307-313 Corn Exchange Bldg, Cathedral St, Manchester 4

Wall St shuffle

Kuma has released a simulation game of the stock market on the Commodore 64. You must pay attention to the news items regarding company shares, and you can take advantage of hints and tips — although not all are reliable.

This is your chance to make your fortune — or give it all away — but take heed: he bank eliminates bad debtors. If you're tactically brilliant you can avoid income tax, but don't make too much money, since super tax is crippling.

One to four players can participate and the game costs £6.95. Jon Day, sales manager, said: "Commodore owners will find this challenging simulation game a refreshing change from the normal zap-pow arcade games. Dare we say: an ideal Xmas present for the would-be investor?"

Kuma, 12 Horseshoe Rd, Pangbourne, Berks RG8 7GW

Plug it in

Here's an expensive alternative to the common or garden plug: The Plug from Power International. At £17.75, it's considerably dearer than the usual version, but Power claims it eliminates electrical hiccups — small power surges and spikes — instantly.

Lost or corrupt date due to variances in power will become a thing of the past, according to Power, and the company promises that The Plug will ensure Christmas spirit of good will really does prevail.

Power International, 2a Isambard Brunel Rd, Portsmouth, Hants PO1 2DU

The Plug from Power International

I spy

You are a British agent in a wartime Germany, in 1942 Mission by CCS. You must penetrate a camp and seize the plans, which are kept in a strong safe. Schmidt, a German guard, will help you, as he is a double agent.

This adventure game features sound via a tape recorder and there are special verbs. If your energy factor falls below zero you cannot go on.

1942 Mission costs £5.95 and runs on the Spectrum.

CCS, 14 Langton Way, Blackheath, London SE3 7TL

Crib from cards

Are you fed up with having to check back to your computer manual whenever you need to know some detail for programming? For £1.99 per card you can now buy Computer Crib Cards, from Phoenix.

Commodore 64, Spectrum, BBC and Electron cards are available. Topics like keywords, operating commands, graphic and sound commands are included, to name but a few.

The cards are reported to be made of sturdy glossy card which will not spring shut at the crucial moment, and each card comes in a polythene sleeve.

Phoenix Publishing, 14 Vernon Rd, Bushey, Herts WD2 2JL

Micro breakdown

The guarantee on many computers will be expiring soon, if it hasn't already. Then you're faced with the problem of who will mend your computer when it breaks down, and worse still, how much it will cost.

Computer-fix, of Camberley, has established a network of 500 dealers. From the time you hand your micro over the counter to one of the specified dealers, Computer-fix guarantees that your computer will be mended in 48 hours, plus the postage time from your dealer to Camberley and back.

Speedy repairs can be assured thanks to ACUMEN, Advanced Computer Memory Tester, which can diagnose faults in any of the 10 best-selling home computers in "just seconds", according to Computer-fix. And the company states that the ACUMEN machine would only cost £5,000 if sold — 5 per cent of the cost of existing advanced test equipment.

Managing director Ray Johnson explained that it takes a skilled computer engineer half a day to track down a small fault in a micro. "The answer had to be largely to take the skilled computer engineer out of the repair process for cheap computers and replace him with ... a cheap computer!" he said.

He continued: "Home computers could well have become disposable items of technology like toasters — not worth repairing but too expensive to throw away."

Repair prices start at £15.50 including parts, postage, transit insurance and 90-day guarantees on parts and labour. Look in a new yellow pages telephone directory under the classification Computers — Mini and Micro, and you should find Computer-fix dealers there.

Computer-fix, Albany Pk Est, Frimley Rd, Camberley GU15 2PL

Robot Plotter

Penman has launched "the unique robot plotter". It's a three-colour plotter with a built-in character set, which can cope with any size of paper. According to Penman, it can draw perfect circles and straight lines in any direction and is reported to be less than half the cost of its nearest rival.

As well as being an accurate plotter, Penman claims it is a high resolution printer, desktop turtle, precision robot with tactile feedback to sense obstacles, and it can also function as a mouse.

The unit can be connected to almost any computer with an RS232 interface and it costs £217 plus VAT.

Penman, 8 Hazelwood Close, Dominion Way, Worthing, W Sussex BN14 8NP

Adventure helpline

If you're an adventure fanatic your life could be made easier by Adventure Planner from Print 'n' Plotter. It's a 50-page planning pad, A3-size, which enables you to plan your game and keep a record of your manoeuvres.

Each page contains a mapping system with over 150 locations. You are provided with examples and hints and tips on how to use the planner to its best advantage.

Price: £3.95

Print 'n' Plotter, 19 Borough High St, London SE1 9SE

Trio for Amstrad

Timeslip is the name of a new software house which has released three games for the Amstrad CPC464. Rollaball, The Royal Quest and The Moors Challenge cost £6.95 each.

Rollaball is promoted as being "so original it defies description". What you must do is manoeuvre one of a number of sliding panels over a gaping hole to form a continuous track along which the rollaball runs. More and more empty panels are left and the game is reported to be frustrating, difficult but addictive.

In The Royal Quest anything can happen, according to Timeslip. You instruct your guide to find the King of Grall's magic crown. This text-only adventure is said to be tongue in cheek and you must have your wits about you.

The Moors Challenge is an Othello-type program played on an 8 x 8 board. Five skill levels and a demo are features.

Timeslip, The Old Primary School, Main St, Stoneyburn, W Lothian EH47 8PA

Learn with Mr Men

"Mr Men make learning fun for children," so says the promotion for Mirrorsoft's latest launch, Word Games with the Mr Men.

This is a double-cassette pack of word games, recommended for children in the five- to eight-years range. There are two main programs: the first teaches opposites, comparatives and superlatives, while the second demonstrates words such as on, in and next to, with animated

Penman three-colour robot plotter

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   PROGRAMMING FEATURES: Built in Atari Basic programming language supporting peek, poke and USR plus at least 8 other languages available. The help key will provide additional information and menu screens with certain software. Full on-screen editing is available as well as syntax checking on entry.
   INPUT/OUTPUT: External processor bus for expansion with memory and peripherals. Composite video monitor output. Peripheral port for direct connection to Atari standard peripherals. Software cartridge slot is included as well as 2 joystick controller ports.
   SOFTWARE: Over 1,500 items of software are available including self teaching programs with unique voice over. The range of programs includes Education, Home Management & Programming aids. There is also APX (Atari Program Exchange) and of course Atari's famous entertainment software now at only £9.95. In addition there is a host of support and help available from specialist Atari magazines like Antic and Analog and from over 75 Atari books/manuals.
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☐	800 48K Computer £99	☐	Letter Quality Printer £249
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The only sources of protection at your disposal are quick wits and fast reflexes. The only reward is to survive against monsters of unbelievable ferocity and cunning, and to avoid hazards more perilous and deadly than any you might find on a trip through the outer universe. This is the real world, populated by the creatures of our own inner universe, where nature is red in tooth and claw. Brace yourself now, and come with Starcade into the still water and deceptive calm of the **SAVAGE POND.**

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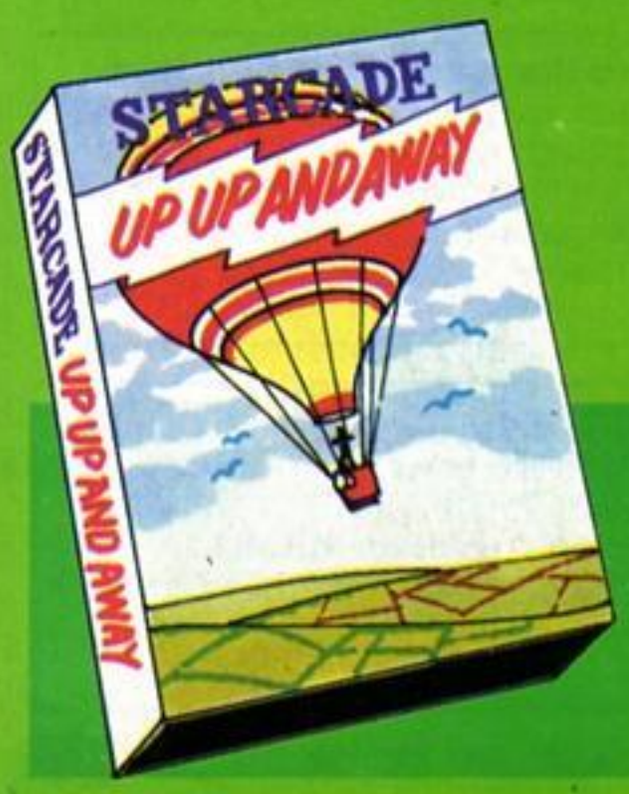

Up Up and Away
COMMODORE, ATARI, BBC
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STARCADE

Argus Press Software Group

produced by
ARGUS PRESS SOFTWARE
No 1 Golden Square, London W1R 3AB
Telephone: 01 437 0626

sequences.

Widgit Software designed the games, and a keyboard overlay and instruction booklet is included in the purchase price of £9.95. Available for the Spectrum.

Mirrorsoft, Holborn Circus, London EC1P 1DQ

School romp

Skooldaze, from Microsphere, is "a fast action romp through your youth." Running on the Spectrum, it features stereotypical school characters, like the bully who violently smacks you on the nose, the angelic-looking terror who will get you with his catapult, and the virtuous swot who knows all the answers.

Skyranger, also from Microsphere, is a 3D shoot-em-up game which the company claims will make the attempts of other 3Ders look a little pedestrian to say the least. Fly through the city to defeat the Watchers. Your view from the cockput will show you what it really looks like.

Both run on the Spectrum and cost £5.95

Microsphere, 72 Roseberry Rd, London N10 2LA

Briefly

Now on the Amstrad CPC464: War Zone, from CCS. You play against the computer and you can have from 15 to 150 pieces of infantry, tanks and artillary.

Price: 6.95.

CCS, 14 Langton Way, Blackheath, London SE3 7TL

The Ket Trilogy, from Incentive, is now available in a gift pack. The Mountains of Ket, The Temple of Vran and The Final Mission will cost £12.95 in the presentation set, a saving of £3.55 on the individual price.

Incentive, 43 London St, Reading RG1 4SQ

Wally Week, star of Pyjamarama, can now be seen on Commodore 64 and Amstrad CPC464.

Price: 7.95.

Mikro-Gen, 44 The Broadway, Bracknell, Berks

Paul Clansey, face to face with the Alien

Alien strikes back

After Ghostbusters — the game of the film — from Activision, here's Alien, from Argus Press Software, in the Mind Games range.

Twentieth Century Fox has licensed the game, and it's available on the Commodore 64 for starters. Spectrum version will follow in early December. At £8.99 the package includes a 16-page booklet with stills from the film, and a guide.

Paul Clansey, programmer, worked on the project for several months and is fascinated by the film.

Alien — the game — is one of speed and strategy. "It sets new standards in strategic gameplay", according to Peter Holmes of Mind Gams.

Argus Press Software, No. 1 Golden Square, London W1R 3AB

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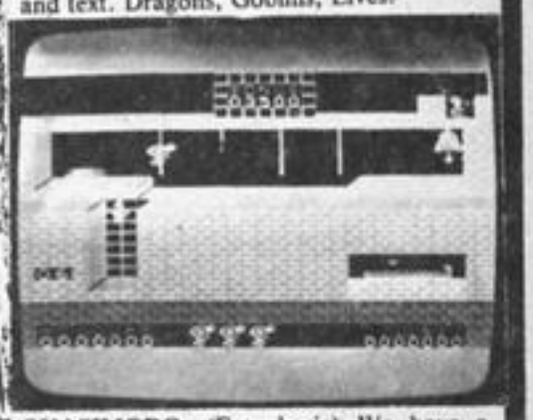

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Projector 1 48K Spectrum £13.95

McGraw-Hill, Maidenhead, Berks

An impressive-looking package sub-titled Business Graphics Forecasting & Presentation System, which allows you to input date oriented data such as sales info, pairs of values e.g. target and actual sales, or other statistics, and reproduce them in histogram, line graph or pie chart form.

In addition, lines or curves can be fitted automatically to the graphs allowing projections to be made. All scaling is automatic and very rapid, and a very impressive colour fill routine, which the Spectrum lacks in standard form, is employed.

Text can also be input, either as labels or for display in an oversize character set. Using the built-in facilities, you can create a "slide show" based on the screens held in memory. These can be recalled from Microdrive or cassette.

The package also includes driver routines for a number of printer interfaces to allow hard copy on full size printers, and from which OHP transparencies or litho plates could be made. Unfortunately, only Epson printers are catered for, which is very limiting.

Reasonable value when the amount of real work it will do is taken into account. **D.M.**

instructions	100%
ease of use	100%
display	100%
value for money	85%

★ ★ ★ ★ ★

Turbo 64 CBM 64 £7.95

Limbic Systems, Hensington Rd, Woodstock, Oxford OX7 1JR

Most HCW readers will have seen the marvellous Atari machine in which you drive a car in a Grand Prix. Several software houses have brought out copies on home computers.

In this game, you are in the driving seat of a Grand Prix car. You see through the windscreen and your view is of the road coming towards you. The use of graphics is very neat and the effect is extremely life-like. Even the road signs become larger and more legible as they approach you.

The idea is to lap at the highest speed possible. Your score is a combination of average speed, accuracy of driving and correct choice of gear.

You have the choice of two circuits, automatic or manual gearbox and number of laps. I was disappointed to discover that there are no opposing cars to drive against, but the game is quite a challenge in spite of this drawback.

The game comes with an anti-pirating device which involves inputting colours which you must read off a chart which comes with the game.

Overall, not a bad game, and quite challenging.

instructions	80%
ease of use	80%
graphics	90%
value for money	80%

★ ★ ★ ★

Doodle on your computer

Paint and draw, there's lots more! Find the one, you'll have some fun

Number Painter BBC £9.95

Applied Systems Knowledge, London Hse, 68 Upper Richmond Rd, London

Number Painter is an excellent and entertaining educational maths program for five to 14-year-olds.

It's in two parts: a timed self-test and the main game which has a screen layout reminiscent of Acorn's Monsters. Scattered about the levels are random numbers and operators, and at screen top are two numbers; one being your starting number and the other the target which you must match by moving a painter around the screen to paint out the appropriate numbers, which are used to perform arithmetic operations on the starting number. Each sub-game has a time limit and each new game is introduced by an appealing graphics routine.

You can choose both the speed of play and level, a combination which gives 48 different levels of difficulty, the highest of which will test the reactions and mental arithmetic of any age group.

Instructions are first class and capable of being understood by the youngest of players and the cassette is packaged in a strong box. My only criticisms are of the difficulty of reading white on red random numbers in the game and the use of arrows in the self test equations.

instructions	95%
playability	80%
graphics	85%
value for money	85%

★ ★ ★ ★

Where? Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

Where? is an appropriate name for this educational game. After the game has been loaded a map of Britain appears on the screen. In this game your knowledge of the geographical location of places, rivers and peaks in Britain is tested.

Once you've entered your name, the computer asks you questions by pointing at a location on the map. You are given four possible answers: press the number you think is right. If you're correct you are congratulated, if not you're given the correct answer.

After you have answered 10 questions the computer gives you your total marks and the average time it has taken you to answer a question. If you press the key while the computer is asking you the question you get told off in no uncertain fashion and you score is taken away. There is no limit to how many players can play.

After you have been playing for a while you suddenly find there are places, rivers and peaks you have never heard of. The positioning on the map is fairly accurate. **M.B.**

instructions	80%
playability	90%
graphics	N/A
value for money	100%

★ ★ ★ ★ ★

Doodle CBM 64 £12.95 (disc)

Quicksilva, PO Box 6, Wimborne, Dorset BH21 7PY

Here's another company jumping on the bandwagon with a graphics package for the 64 (the fifth I've seen). It compares quite well with the opposition.

First the bad news. Only hi-resolution mode is supported.

Once the routine is up and running, you get a view of the main menu which offers ID options. These cover the usual modes for drawing lines, circles, boxes, dots, zoom, data retrieval and others. You can choose between nine brush widths. In the various drawing modes you can draw, erase, flip and fill. When you want to save or load designs, a directory appears on screen showing which designs are on disc and how much free space is available. Screen dump to printer is a welcome and useful facility.

The package comes with a reasonable instruction book, but you won't need it often since each mode carries a detailed HELP screen. You can toggle between the Menu, sketch and HELP screens by using RETURN or SHIFT RETURN.

I found this package very user friendly and a delight. Most important, it's cheaper than most of the opposition and represents excellent value for money. **A.W.**

instructions	100%
ease of use	95%
display	85%
value for money	100%

★ ★ ★ ★ ★

WILDEST DREAMS

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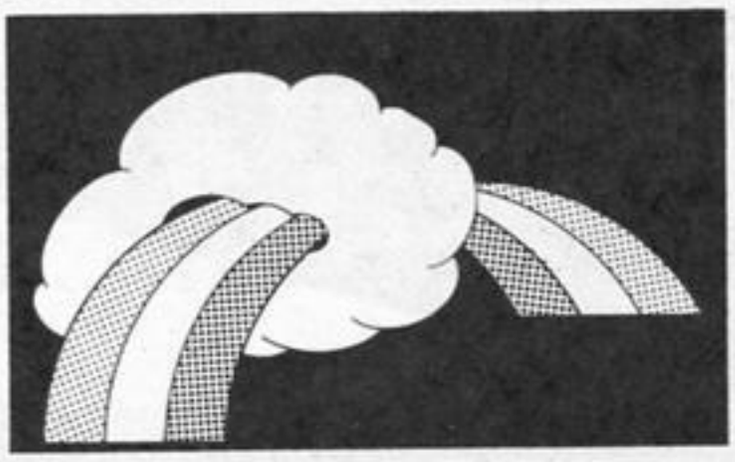

CONTACT:- Chris Kilburn
WILDEST DREAMS
P.O. BOX 84,
COVENTRY.
Tel: (0203) 663085

Asteroid fighter

As a space age crime fighter you pursue escaped criminals across the galaxy. Danger looms when you run into an asteroid belt. Avoid the perils of space in this program by Shingo Sugiura

You are patrolling the universe aboard your trusty fighter when suddenly you spot an escaped space vermin. During the pursuit, you realise that you have unknowingly flown into an asteroid belt. A collision with any of these huge space boulders would result in permanent damage to your ship and three collisions means certain death for you.

Main Variables

SC current score
HI high score
LI number of ships left
MX, My-X and Y co-ordinates of ship
TX-X co-ordinate of alien
A ASCII code of key pressed
DEAD-A boolean to indicate whether you have crashed or not

When this program is run, the instructions will be printed and will wait for the S key to be pressed. Press S and the game will begin. Your ship materialises in the centre of the bottom part of the screen. Then the asteroids will start streaming down the screen. You have to control your ship left and right by pressing Z and X keys respectively. To move up, press the space key. The alien will try to get away from you at the top of the screen. You have to ram it with your ship, without colliding with the asteroids.

This program was written using BASIC-I which limits the size of the program to 4K, so if you have BASIC-G you can do wonders to this game (although, of course, it will work with BASIC-G without any modifications) by possibly redefining the character set, introductory music, bonus scene etc, etc.

When typing in this program, you may find that the screen suddenly clears and you cannot type anything although the key-clicks can be heard. This simply means that you have accidentally pressed CTRL-Y. To return to normal screen, press Y once while holding down CTRL.

Hints on conversion

The M5 allows 32 sprites to be moved about the screen at various sizes. Because this scrolls the text screen, it would be virtually impossible to convert it to run on machines which do not have sprites.

However, if you own machines such as the TI or ATARI, it should not prove too difficult to convert this program, even line by line. If you own a CBM 64 without Simon's BASIC, you would have to rewrite the program using the How It Works section as a guide line.

STCHR defines a character or a sprite
SCOL colours a sprite
SCOD is used to assign a character code (in ASCII) to a sprite
LOC A,X,Y places sprite No.A at co-ordinate X,Y
OUT sends data to an output port. In the program, this command is used to create sound.

How it works

I have tried to write this program as modularly as BASIC allows but if you have BASIC-G, many of the loops which use GOTO can be replaced by the far more elegant REPEAT-UNTIL instruction.

10-20 REM statements
40 selects G-II mode, magnification 1
50 calls subroutine which defines characters, calls subroutine which prints instructions
60 initialises score, number of lives
70 clears screen and initialises position of ship and alien
80 scans keyboard
90-110 update position of ship
120 prints ship
130 prints asteroid and scroll the screen one line down
140-150 check characters in ship's position
160-170 move alien
180 prints alien in new position
190 increments score if needed
200 if ship hasn't crashed, go back to the beginning of main loop
220 beginning of score subroutine
230-300 erase image of alien, plot explosion in place
310 increments score
320 explosion
330 clears screen and initialises position of ship
340 end of subroutine
350 beginning of subroutine, called if ship crashes
360 explosion sound
370-430 plot explosion
440 clears screen and initialises position of ship
450 end of subroutine
460 beginning of subroutine, called when three ships lost
470-510 print end of game message
520 wait for R to be pressed
530 end of subroutine
540-650 define characters
660 beginning of subroutine to print instructions
680 gets rid of keyboard-click
690-830 print title and instructions
840 scan keys
850-880 move ship and alien
890 check whether S is pressed
900 end of subroutine

15 PROGRAM

```
10rem Asteroid Fighter
20rem By Shingo Sugiura
30:
40 print "[URL]":mag 1
50 gosub $DEFINE:gosub $INST
60 let SC=0:let LI=3
70 cls:let MX=15:let MY=22:let TX=rnd(30):let DEAD=0
80 let A=peek(&702B)
90 if A=34 then let MX=MX-(MX<30)
100 if A=33 then let MX=MX+(MX>0)
110 if A=7 then let MY=MY-1:if MY=1 then let MY=23
120 loc 0 to MX*8,MY*8
130 print cursor(rnd(31),0);chr$(254);"■"
140 let PE=vpeek(&3800+MY*32+MX)+vpeek(&3800+MY*32+MX+1)+vpe
ek(&3800+MY*32+MX+32)+vpeek(&3800+MY*32+MX+33)
150 if PE>253 then gosub $DIE
160 let TX=TX+rnd(2)-1
170 if TX>30 then let TX=0 else if TX<0 then let TX=30
180 loc 1 to TX*8,24
190 if(TX=MX or TX=MX-1 or TX=MX+1)and MY<5 then gosub $SCOR
E
200 if not DEAD then goto 80 else gosub $END
210 goto 60
220$SCORE
230 loc 1 to 300,300:loc 0 to 300,300:out &20,177
240 for B=164 to 191
250 out &20,B
260 loc 2 to TX*8,24
270 for D=0 to 50:next
280 loc 3 to TX*8,24
290 for D=0 to 50:next D
300 next
310 let SC=SC+100
320 loc 2 to 300,300:loc 3 to 300,300
330 cls:let MX=15:let MY=22
340 return
350$DIE
360 out &20,&9F:out &20,&BF:out &20,&E4:out &20,&F0
370 loc 2 to MX*8,MY*8:loc 0 to 300,300
380 for D=0 to 1000:next:loc 2 to 300,300
390 out &20,&E7
400 for S=&F0 to &FF:out &20,S
410 for D=0 to 300:next D:next S
420 loc 3 to 300,300
430 let LI=LI-1:if LI=0 then let DEAD=-1
440 cls:let MX=15:let MY=22
450 return
460$END
470 print cursor(8,10);"G A M E  O V E R"
480 print cursor(8,12);"Your score was ";SC
490 if SC>HI then let HI=SC
500 print cursor(8,14);"High score is ";HI
510 print cursor(8,17);"Press R to replay"
520 let A$=inkey$:if A$<>"R" and A$<>"r" then goto 520
530 return
540$DEFINE
550 stchr "08141c1c143e7f63" to 250,0
560 stchr "c6287cd6baee54c6" to 251,0
570 stchr "2812b855be142200" to 252,0
580 stchr "4a2a9d6a14bc5289" to 253,0
590 for I=1 to 3
600 stchr "082a2a003e6f573e" to 254,I
610 next
620 scod 0,250:scod 1,251:scod 2,252:scod 3,253
630 scol 0,13:scol 1,8:scol 2,6:scol 3,7
```

SORD/CGL M5 PROGRAM

```
640 let HI=100
650 return
660$INST
670 let XO=100:let XT=100:let IO=1:let IT=-1
680 Poke &701A,1
690 Print "▄▄▄ ▄▄▄ ▄▄▄▄ ▄▄▄▄ ▄▄▄ ▄▄▄▄ ▄▄▄ ▄▄▄"
700 Print "▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
710 Print "▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
720 Print "▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
730 Print
740 Print "  ▄▄▄ ▄▄▄ ▄▄▄▄ ▄▄▄▄ ▄▄▄ ▄▄▄▄ ▄▄▄ ▄▄▄"
750 Print "  ▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
760 Print "  ▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
770 Print "  ▀▄▄ ▄▄▀ ▀▄▄▀ ▀▄▄▀ ▀▄▄ ▀▄▄▀ ▀▄▄ ▀▄▄"
780 Print tab(7)"↓Copyright (C) 1983"
790 Print tab(7)"↓By Shingo Sugiura"
800 Print tab(13)"↓SPACE"
810 Print tab(15)"▲↓"
820 Print tab(9)"z ◀        ▶ x"
830 Print tab(9)"↓↓↓Press S to start"
840 let A$=inkey$
850 if XT>250 then let IT=-1 else if XT<5 then let IT=1
860 if XO>250 then let IO=-1 else if XO<5 then let IO=1
870 let XO=XO+IO:loc 1 to XO,22
880 let XT=XT+IT:loc 0 to XT,160
890 if A$<>"s" and A$<>"S" then goto 840
900 return
```


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Esteem More Than Equal

These are the first three parts of what is obviously hoped to be a long running sage. Chapter 1 is a cross-section of the planet Mars. Your task is to collect parts for your escape ship. The planet is breaking up, and you must dodge flying debris and dripping acid to succeed. Chapter 2 has you on board, attempting to refuel by aiming your fuel line at the tanker ship ahead. In chapter 3 you have landed on Earth but must defend yourself from the earthlings.

Graphically, this is far more sophisticated than you have a right to expect at this price. Although principally machine code, there is a BASIC driver program. The result is a slight flicker.

On the other hand, you get very inventive screens in a unique sci-fi mock gothic style complete with 3D. My only quibbles are the lack of provision for joysticks: it's very hard without, and the return to demo mode every time you fail, is annoying.

All in all, very good. Well worth the outlay, though a little more programming time in the areas mentioned above would have been welcome. **D.M.**

instructions	100%
playability	50%
graphics	60%
value for money	100%

★ ★ ★

Skyline Attack CBM 64 £8.95

Century Communications

It is debatable whether it is more fun to play this game or load it. Skyline Attack not only leaves the screen on while loading, but also plays a simple game, Ssnake, an hors d'oeuvre for what is to follow. Ssnake is fun and very playable.

The scenario in Skyline Attack is not new. Earth is being attacked by aliens, and you must shoot them down to save the world. This is a Defender-type game with the landscape scrolling both ways and many of the major cities are represented. You start in London where Tower Bridge is constantly raising and lowering. When you shoot an alien there is a chance that it may drop a fuel pod. In order to survive you need to catch as many of these as possible. If you shoot a fuel pod there is a 50:50 chance that it may turn into a crystal.

To visit other cities, you must collect crystals. A counter at the top of the screen tells you how many you need. Some of the cities are very spectacular: at the North Pole a polar bear stands on a mint and nods his head, and elsewhere the Sphinx wags its tail. The game is fast and furious in a Minter-kind of way, which is a shame since you don't see all the graphics — still, saving the world was never an easy job. **S.R.**

instructions	75%
playability	95%
graphics	100%
value for money	100%

★ ★ ★ ★

Empire CBM 64 £6.95

Shards, Suite G, Roycraft Hse, Linton Rd, Barking, Essex

Empire is a computer version of a war game played using maps and moving across territories. The world is divided into 39 territories and you choose 13 of these as your own while the enemy, the Empire, chooses a further 13. You then allocate your 26 armies across your territory.

You and the enemy attack in turns. After the enemy attack you have twenty seconds to respond otherwise the Empire strikes again. You use the function keys to move round the world. You then select the territory to attack from and which adjacent territory to attack. If you gain the territory you can move some of your forces into it.

There are eight levels of play but I only tried the first level. Half an hour later I had taken over the world.

The game lends itself to a certain amount of strategic planning and is not a bad attempt at simple war gaming. The screen does not use high resolution graphics but the countries are quite recognisable. I found it took a little time to get into the ebb and flow of the screen prompts but was soon engrossed in the battle with the Empire.

F5 and F6 are misprinted as F3 and F4 in the instructions but otherwise a good game. **L.C.**

instructions	60%
playability	80%
graphics	70%
value for money	70%

★ ★ ★ ★

War and peace

The theme is combat: can you survive?

Rubble Trouble Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

The scene is set on earth devastated by nuclear bombs after the third world war. Due to the radioactivity a cannabilistic turtle shaped creature known as Krackats has evolved.

On the screen is displayed a maze of boulders, within which roam the Krackats. You must kill them by crushing them under the boulders. You line a rock with the Krackat and push it. The danger is that if you miss, the rock may bounce back and crush you instead. The Krackats have very good reflexes so make sure you have plenty of room to manoeuvre.

There are three games in all. In the second the whole screen is full of rocks. Some of these rocks are only mirages and disappear when you walk through them. Unfortunately the mutants know which rocks are fake and can close in on you quickly. In the third part all the rocks are invisible and it's only when you crush a bonus rock, that the rest of the rocks become visible for a short period.

Lots of original features, smooth graphics and excellent sound. An arcade excitement at home. **M.B.**

instructions	85%
playability	95%
graphics	95%
value for money	90%

★ ★ ★ ★ ★

Volcano: The Action Game 48K Spectrum £7.95

Computer Magic, 39 Bridges St, Walton on Thames, Surrey KT12 1AF

The object is to escape from a city threatened by volcanic lava and rocks to an awaiting boat. Reading the accompanying blurb conjured up marvellous pictures of lava streams, rioters, underground passsages: "40 screens above ground: over 290 3D screens below..."; all this accompanied by a superb picture of a volcano.

The reality was very disappointing. This is, in effect, a very large maze game. Two animated feet are steered through the maze which is progressively blocked by red blobs, sorry... rocks! These can be cleared by the use of dynamite collected from boxes, sorry... shops! Food must also be collected, otherwise, lose a life. You may also come across a slow moving red smudge. This is the lava stream!

You can also enter the underground passages. The 3D graphics here are rather fine, but after wandering for 15 minutes it all looked the same to me, so I gave up.

A free map, said to be essential is given with the game, but I didn't get one; perhaps this was the problem. In comparison with the claims, and indeed the same concept in other hands, very disappointing. **D.M.**

instructions	60%
playability	60%
graphics	55%
value for money	60%

★ ★ ★

Take a close look at your keyboard

David Rees invites you to study all the potential of the Commodore 64 keyboard. You can control speed and alter the keyboard memory — read on for details

One of the points made when people extol the virtues of the Commodore 64 is its keyboard. The keys are sculptured to the fingers' shape, are well balanced, springy, and of just the right sensitivity. However, no one seems to mention their performance as far as software is concerned. Watch out: this barrier of silence is about to be broken!

The Commodore keyboard has massive potential, the only problem being that the better the facility required, the longer the program needed to produce it. One of the easiest effects to produce is key repeat. The location of the key repeat register is at byte 650, and it is normally set to zero. However, by POKEing it to 64 none of the keys repeat, and 128 makes all the keys repeat.

The other key repeat feature which can be controlled is speed. Location 651 controls how long the computer waits between the time you start pressing the key and the time when it starts repeating. POKEing one produces a quick start, while zero produces the longest delay. The only disadvantage is that the register with your value is in a one shot mode, so once your delay has been used up, the register returns to its original value.

The easiest way to influence repeat speed is to change the delay before each Interrupt Request or IRQ. By POKEing location 56325 with a value between 10 (fast) and 255 (slow), you can vary speed to a large extent. However, a fast cursor slows down a BASIC program, so the best use for this is screen editing.

One of the annoying things I find when using a keyboard is typing in many letters and discovering that only a few have actually been displayed. The opposite occurs when a neat display is ruined by a group of letters appearing when you have been keying them in slowly. The cause of this aggravation is the keyboard buffer. This stores keys when the computer is doing something else. However, as it is set it can only remember 10 keys, so either it forgets what you typed, or it remembers too much!

Luckily, a cure is at hand, in the form of location 649. This contains the maximum buffer length and can easily be varied between one (single key entry) and 15. However, caution is needed, as making the buffer too long erases important memory locations, so go beyond 15 at your peril.

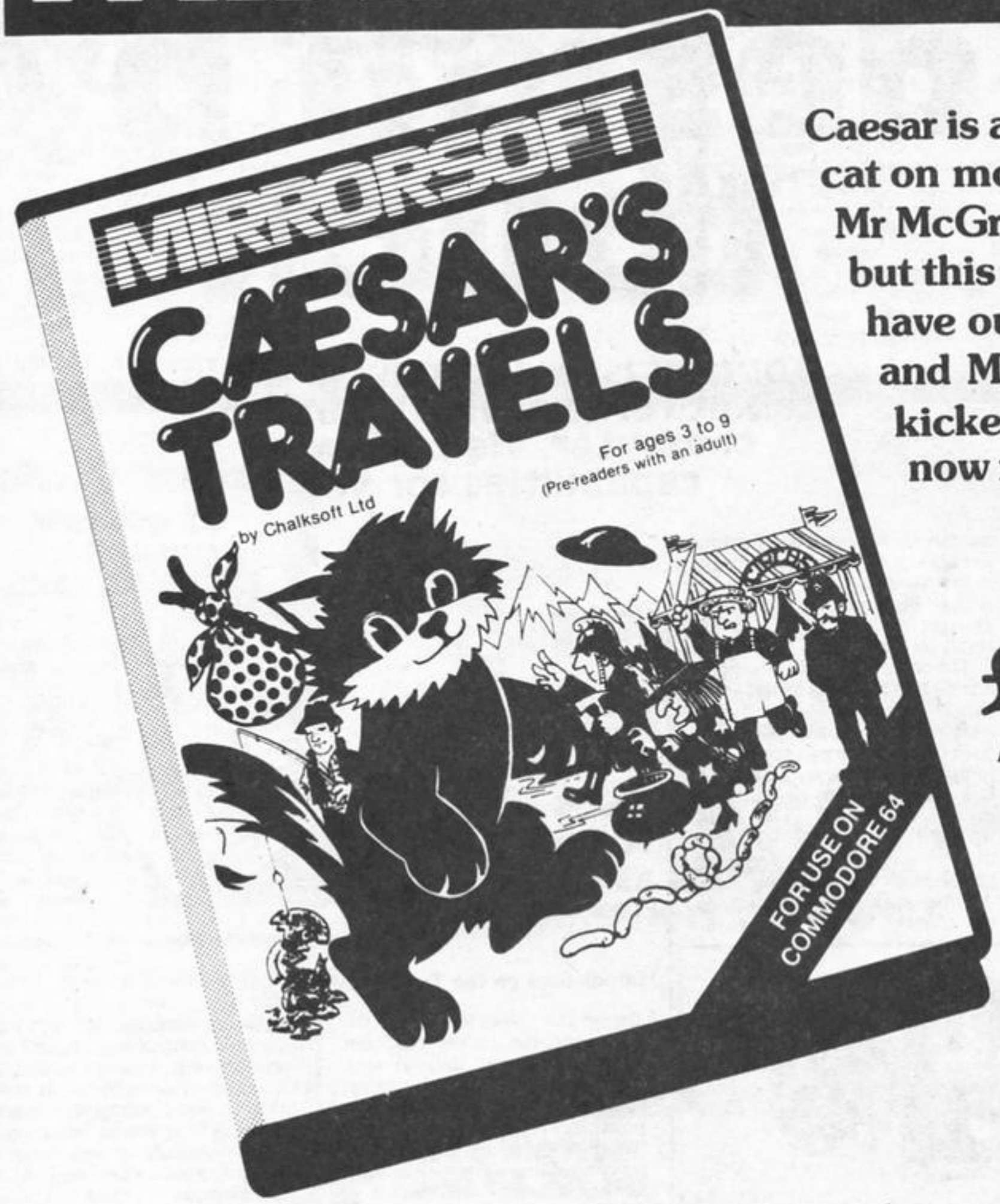
My final tip about the Commodore keyboard will probably be the most interesting, as it has wide applications. Many expensive computers have what is called Multiple Key Rollover. This means you can press several keys at once, and the computer will remember them all. The Commodore manual says you can only obtain one key at a time on the 64, but with a little liberal POKEing many effects are possible.

Using my method, the keyboard can be split into eight sections, each containing two columns of keys. Each bit in location 56322 represents a pair of key columns (with some experimentation you will be able to find which bits control which keys) and the keys will only be received if that bit is on. Thus, by switching on each bit in turn and getting a key, eight separate keys will be received. The following line will allow you to do this (R = key row):

```
POKE 56322,2 R: SYS 65439: GET A$: POKE 56322,255
```

Always use POKE 56322,255 at the end, otherwise the keyboard will become almost useless, receiving only a few keys, and you won't be able to start or stop anything. However, when the routine does run correctly it is invaluable. Fast typing is made much easier, but its biggest use is in games, where you can have up to eight people playing at the same time!

MIRRORSOFT



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Draw and design by touch

Touchmaster £149.99

Touchmaster, Port Talbot, W Glam SA13 1WD

Touchmaster is a new graphic tablet for use with your home computer. We review its capabilities for you

Although this review is also available on the BBC version of the product it is also available for the Dragon, Commodore 64, VIC-20 and Spectrum computers, each needing a different interface but using the same touch pad.

The method used to input information to a computer is often seen as a problem for the naive user. The search is always on to find new and simpler methods of telling the machine what to do. The use of a graphic tablet is one alternative and that is what this product package represents. The box contains all you require to get the system up and working within minutes and I must say that the pictures in the leaflet supplied made this fairly simple. There are two leads to be connected, one to the computer and another to the power pack supplied.

The pad itself is a grey plastic box, 13 by 14 inches with a plastic membrane in the centre of A4 dimensions. This means you can prepare a drawing of other detail on a sheet and then transfer it to the screen. With the pad come the leads, a pen/stylus, two instruction books, a software cassette and an order form for more software. The software supplied is a drawing program and allows you to draw freehand on the screen, but more of this later.

When you have the unit connected there is a short listing for each of the machines which will allow you to find the location of the stylus in x and y co-ordinate values. This was where the first disappointment surfaced.

Simons Says on the Touchmaster

Touchmaster — play by touch

The BBC listing gave co-ordinates of up to 1020 on each axis. This means that a pad with an oblong shape was returning values which only covered part of the screen and which treated the pad as if it were square. If you draw lines of the same length in both axes they would be different lengths on the screen. This is not what most users want, I feel, and the remedy is quite simple: all you need do is change the scaling of the value returned in the X axis so that the value can then go up to 1280. If you do this you get a much more accurate result on screen.

The concept of Touchmaster is attractive, but use is less than satisfactory in my view. For a start it is mis-named: you don't have to touch the pad so much as jump on it to get a response. This is a real drawback and stopped my son, aged six, from achieving the results that he wanted, since the amount of pressure needed to get a result was far too high. Another problem is that drawing too quickly, as you tend to do around curves, means that the values are not passed quickly enough and either blanks or straight lines were the result. Resolution is good and using the highest resolution mode it is possible to define 256 points in each direction.

The software provided is a very basic drawing package which I cannot really recommend for serious use. It is possible to change the colour to any of the ones available on the BBC but there is only one defined at a time and there is no logical colour/actual colour conversion possible. This means that you cannot have a background colour change after you have started drawing and that it is difficult to set up screens for animation effects. The circle drawing leaves a dot in the centre, looks elliptical on occasions and can be difficult to use.

There is the chance to change the brush type and style and this can give attractive effects. Unfortunately, however, there is no erasure facility, making that a major task in itself. Screens must be saved as a section of memory, in the BBC's case taking 30K, and there is no redrawing software either. Text cannot be input to a picture without saving a screen and then using another drawing package and there is no option to dump a screen to a printer. As I said at the beginning of this paragraph, this is a very basic program.

I must mention the documentation supplied. The two booklets are attractively produced but contain no real hard information about the product or how to use its output in your own programs. It isn't difficult and I managed to have it working in a matter of seconds but it would have been nice to have had some technical information supplied. As the booklets are, they are sadly lacking. Another problem is the nature of the mat itself. It works by detecting changes of resistance in two axes caused by a depression on its surface. This works very well unless you press in two places at the same time, when it detects the value as being half way between the two depressions. This is not likely to cause problems for most users but might do so if used by young people or by the handicapped.

Overall, I find it difficult to see how this pad can be used in a serious and productive way and I cannot really see anyone paying £150 for a toy. It may be that the Touchware which you can order will make it more viable a proposition in a range of areas, but I will need some convincing that it is going to be worth the money.

D.C.

Galilee
48K Spectrum
£5.75

Shards, Suite G, Roycraft Hse, 15 Linton Rd, Barking, Essex

The plot for this text adventure is roughly 2000 years old. It is set in the early days of the Christian era during the reign of the Emperor Tiberius.

After the mandatory high resolution screen picture, the main program loads, whereupon you wake up in a graveyard, with a mission to fulfil. I found progress agonisingly slow, due to my lack of knowledge of the scriptures. Every time I used the HELP facility, I was directed to an appropriate verse in the Bible. When facing defeat, I can never resist a little exploratory, hopeful press on the BREAK key and surprisingly, it worked, revealing the listing of this biblical epic.

It's a competent programming effort, but I found it stodgy and lacking in innovation. Interpretation of human input was not very flexible and it responded only to one; or at most, two-word instructions.

On the whole, the plot was a refreshing change and I feel that the program could well find application as an educational aid in religious instruction classes. I'm not sure that it would find favour elsewhere. **M.B.**

instructions	70%
playability	60%
graphics	40%
value for money	50%

★ ★ ★

Chartbuster
CBM 64 £9.95

Alligata, 1 Orange St, Sheffield S1 4DW

I have often wondered what software houses do with their products when sales tail off. Now I know. They bring out a compendium.

This package contains five games: Blagger, Eagle Empire, Killer Watt, Panic Planet and Bugblaster.

Blagger is a tricky graphical adventure of very good quality which is good for many hours of frustration. Killer Watt is more bizarre and involves flying about a cave system shooting light bulbs, fish, clockwork ducks and other weird creatures. The first screen is nice and gentle, but the rest are appalling tricky... good fun.

Eagle Empire is a version of Phoenix and Panic Planet is a version of Panic. Bugblaster is a version of Catapillar, and quite good. There is a wide range of creepy crawlies to massacre.

All games are turbo loaded and are of a good standard. I did note that one side of the tape showed the usual poor Alligata duplication but fortunately the other loaded well. The games performed well.

Overall an interesting assortment which, at £2 a game compares very well with the budget game sellers. **M.W.**

instructions	60%
ease of use	85%
graphics	75%
value for money	100%

★ ★ ★ ★ ★

Return to Eden
CBM 64 £9.95

Level 9 Computing, 229 Hughenden Rd, High Wycombe, Bucks

As an adventure fan, I viewed the prospect of reviewing the latest Level 9 game with excitement. This particular game marks something of a landmark since it's the first Level 9 adventure with graphics and, much to my surprise, the game doesn't suffer adversely. Granted the location descriptions are shorter than before, but I am assured there is about 38K of text.

The game follows on from Snowball and features your alter ego Kim Kimberley stranded on the Planet Eden fighting for your life. The scenario is extensive with about 250 locations, most of them illustrated. I won't give any details of the plot: but it'll keep you busy for many an hour.

The game is full of tricky puzzles, some horrendously devious. You gain points for solving the adventure, not for collecting treasure.

The illustrations are drawn in multicolour mode and while relatively simple, are well designed and do enhance play. Best of all, they're drawn quickly. The game is accompanied by a very good instruction manual and the usual envelope for a free hint.

Overall, excellent value which, in my view, is unsurpassed by any other software house in this country. Buy it and enjoy. **A.W.**

instructions	95%
ease of use	100%
graphics	85%
value for money	100%

★ ★ ★ ★ ★

Amazing adventures

This selection of our adventure software has been checked over for you by our panel of expert reviewers

Cave Fighter
CBM 64 £6.99

Bubblebus, 87 High Street, Tonbridge, Kent TN9 1RX

You shouldn't have much trouble in guessing that this is a graphic adventure in which you control a man through caves. There are 31 caves each of the same layout with changes for variety. The caves are wider than the screen so it scrolls to accommodate your movements. As expected they are inhabited by nasties who mean instant death. You can shoot them. You can move about by walking, jumping or using ropes hanging from the cave roof. You can jump to different heights by setting a jump strength meter.

You can select any cave to play and have up to 99 lives. The aim is to gain points by killing nasties and to complete all the caves. The caves become more difficult as you go on.

The game opens to a rendering of the theme from Chariots of Fire and is of a reasonable standard graphically. The animation of some of the nasties is particularly amusing.

A fair game but no better than average. I became bored after the first five caves and think that there is better on the market. **M.W.**

instructions	80%
ease of use	70%
graphics	70%
value for money	60%

★ ★ ★

The Pettigrew Chronicles
48K Spectrum
£9.95

Shards, Suite G, Roycraft Hse, 15 Linton Rd, Barking, Essex

Before you faint at the price, I should explain that for your money, you get attractive book style packaging with two cassettes. Each cassette holds two substantial adventure games, so at £2.50 per game you cannot fault the value for money.

You take on the mantle of Rupert James Pettigrew, secret agent extraordinaire and your mission is to rescue five fellow agents and find the legendary Safras sword. Each of the four games are separate adventures in their own right, linked by the common theme.

In parts, the adventures are mixtures of semi-arcade games, together with the conventional text style approach. I found this quite novel and a refreshing departure from the norm. In addition the games have a clock — one hour = one minute — and I wondered what would happen if I sat around and made no keyboard input. After a long wait, one of my agents was 'bumped off', so the game goes on whether you participate or not!

I found one or two minor rough edges programming-wise, but on balance I liked this mixture of puzzles, games and text adventure and felt it represented good value for money. **M.B.**

instructions	90%
playability	90%
graphics	60%
value for money	90%

★ ★ ★ ★

Stock Car Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

This game can be played by one or two players. The idea is to control a stock car around a circuit and avoid colliding with your opponent's car.

Before the game starts you are asked to select the percentage of skid, the numbers of laps you want and whether you want any oil patches on the track. When I selected 99 per cent skid, which is the maximum, I found myself skidding all over the track. But the computer cars were driving as if the skid factor was 0 per cent. A bit unfair I thought.

To help you control your car there are four gears available to you. Your selected gear and the number of completed laps are displayed at the top of the screen. Next to this display is a horizontal bar indicating your speed. When you have completed your chosen number of laps the car spins around to the sound of a tune, indicating that you have won.

This game is quite fast with adequate graphics. The control keys are logically selected — an ideal game for the young at heart. **M.B.**

instructions	70%
playability	70%
graphics	60%
value for money	55%

★ ★ ★

Summer Games CBM 64 £19.99 (disc)

Quicksilva, PO Box 6, Wimbourne, Dorset BH21 7PY

The Olympics has produced a plethora of games based on athletics events. Summer games is a more original collection and includes swimming and running, pole vaulting, gymnastics, diving and clay pigeon shooting.

The swimming and running tended to be mindless but the other events required a little skill and practice. The game is disc based and offers nice options and excellent graphics. If you want to perfect your performance in any events, there is a practice mode. Up to eight players can take part and a choice of several nationalities is available. At the end of each event the medal ceremony takes place. Record scores are recorded on the disc for future games.

The graphics are excellent using sprites on multicolour hi-resolution backdrops. There is an opening ceremony with Olympic flame and doves. The sound is good with nice tunes and applause.

This is streets ahead of the others in graphics, animation, realism and originality. It is however rather over priced. **M.W.**

instructions	90%
ease of use	90%
graphics	100%
value for money	75%

★ ★ ★ ★ ★

Ghouls Amstrad CPC 464 £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

This game is available for four different machines and this version is second to none. It is a ladders and levels game with four unique screens each providing a number of hazards and opportunities.

You are in a haunted house, in the form of a Pacman-like creature, and must recover the gems that are on the top floor. On the way you can score by eating the edibles and you must avoid the ghoul who tries to catch you out. Luckily he moves slowly and you can dodge away from him.

There is even a ghoul-destroying pill, which must leave such bad breath that he clears off the screen immediately.

The killer spikes, walking platforms and moving floorboards all make life more difficult. Despite the small number of controls, left/right and jump, this is a difficult and addictive game.

The music and sound effects are some of the best I have heard for this machine. Animation is excellent and even the animated high score chart is worthy of praise. A good game in all respects. **D.C.**

instructions	85%
playability	100%
graphics	95%
value for money	95%

★ ★ ★ ★ ★

From sport to spirits

Here is a selection of arcade games which take you from the Olympic stadium to a mysterious haunted house

Pacmania CBM 64 £7.50

Mr Chip, Neville Pl, Llandudno, LL30 3BL

I know that you are thinking "Not another Pacman clone". This program is a new improved go faster version of the old favourite.

The layout is the same with the usual ghosts, fruit, dots and rotound hero. It does have a few enhancements including several mazes and hyper-ports. These ports enable you to escape from tight corners and they dump you in another position in the maze.

The ghosts appear to be slightly neastier and faster than previous versions, and I settled for eating dots and fruit rather than try to get them. Things didn't seem to get much harder as you progressed through the screens.

Graphically the game is as good as the arcade original with all the animation and colour features. The sound is equally good.

I query the logic in bringing out an enhanced version of an old game. In spite of it's virtues, I cannot see it selling as well as it should. If you don't have a copy of Pacman, however, get this one. **M.W.**

instructions	70%
ease of use	90%
graphics	80%
value for money	70%

★ ★ ★ ★

Swag Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

This is a strange game that is more likely to be an acquired taste than an instant hit.

It is unusual in that it is a two player game and only really begins to work when you compete against another player. I find that the computer is almost unbeatable in the practice mode.

The aim is to steal]250,000 before your opponent. What are we teaching our children? This is done by collecting gems that appear on the screen and taking them to your hideout.

The difficulty comes in the form of the Killer Droids hired by the insurance companies to stop you. They force you to drop your gems and return home if you get caught. Added to this there are the police cars that follow you around if shot at, gold to buy more ammunition for your six shooter, Smileys who send your opponent away, cans of beer and the DH, the purpose of which eludes me.

In all, this is a complex game that takes some getting used to but which can be great fun if you have an opponent. **D.C.**

instructions	80%
playability	90%
graphics	85%
value for money	85%

★ ★ ★ ★

Dual purpose routine for the ZX81

Here's a useful little routine for the ZX81 by Nick Godwin. Use it to delete blocks of lines and at the same time, it will act as a line merge

The original title of this routine was Block Delete, since it was conceived as a means of deleting a large number of lines from a program in one go. However, it could also be entitled Line Merge, since that is what it actually does!

The program works by changing the record of line-length stored in a line, specified at Z1, so that it includes that line and all subsequent lines up to and including the line specified at X2. The bottom of the first page of Chapter 27 of the ZX81 Manual describes the way a BASIC line is organised.

To operate the routine, RUN (or GOTO) 9978 and enter the number of the first line, followed by the number of the last line of the set of lines that you wish to merge together. Lines 9981 to 9985 find the address of the start of the first line, which is assigned to X1. 9986 to 9989 find the address of the **end** of the last line, and this is assigned to X2. 9991&2 assign N = the total number of bytes from the beginning of the first line to the end of the last line. 9993&4 POKE this new 'length' into the record of line-length following the first line number. The computer then 'thinks' that the first line ends at the end of the last line.

This means that if the first line is then deleted, it takes all the specified subsequent lines with it. Alternatively, the complete set of lines can be POKEd with, say, a full stop (CHR$ 27) apart from the first character, which should be POKEd with REM (CODE 234). This makes a long REM statement which can then be used to hold machine-code. This can be achieved using the following routine:

```
100 FOR J=X1+5 TO X2-1
110 POKE J,27
120 NEXT J
999 STOP
```

```
9978 INPUT X1
9979 INPUT X2
9980 LET X=16509
9981 GOSUB 9996
9982 IF N>=X1 THEN GOTO 9985
9983 GOSUB 9998
9984 GOTO 9981
9985 LET X1=X
9986 GOSUB 9996
9987 IF N>X2 THEN GOTO 9990
9988 GOSUB 9998
9989 GOTO 9986
9990 LET X2=X-1
9991 LET X=X1+3
9992 LET N=X2-X
9993 POKE X,INT (N/256)
9994 POKE X-1,N-256*PEEK X
9995 STOP
9996 LET N=PEEK X*256+PEEK (X+1)
9997 RETURN
9998 LET X=X+PEEK (X+2)+256*PEEK
  (X+3)+4
9999 RETURN
```


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Foolproof input check

Programs sometimes crash when you press the wrong key at input. David Nowotnik, HCW regular writer, shows you what to do to prevent this problem

One omission in many of the serious application programs I receive to review for HCW is the lack of a check routine in numeric input. Looking at the listings of these programs, the lines which request a number are usually just INPUT x (or another variable). If, by mistake, a key other than a number or a minus sign is entered as the first character of that number, then on pressing ENTER, the program will crash with the error message 'Variable not found'. Good programs should not crash so easily. The way to avoid this is to incorporate a routine to check that all the entered characters are valid.

An example of this is given in the program lines below:

```
100 INPUT x$, LINE
110 IF x$ = "" THEN GOTO
    100
120 FOR i = 1 TO LEN x$(i)
130 IF x$(i)    "0" OR x$(i)
    "9" THEN GOTO 100
140 NEXT i
```

In line 100, you are asking for a string input. The LINE function removes the quotation marks from either side of the flashing cursor giving the appearance that a numeric input is required. Provided that you have not simply pressed ENTER (line 110), the string is checked to see if all the characters lie between 0 and 9. If any fall outside this range, line 130 returns you to the input request.

You could alter this to print an error message on the screen (this would make the routine more user-friendly) before returning to the input request. Once you have confirmed that the input is valid, then the VAL function can be used to convert the string x$ to the required numeric variable, e.g. LET x = VAL x$.

This routine will only allow the entry of a positive, integer number (or zero). The check routine will have to be more elaborate if you wish to check for an initial plus or minus sign, or check for a decimal point if you wish to enter more complex numbers.

If a plus or minus sign is entered then it must appear as the first character to be valid. Therefore, a line to check for this could be:

```
125 IF i = 1 AND (x$(1) = "+"
    OR x$(1) = "-") AND LEN
    x$      THEN GOTO 140
```

The length of string check in this line is required otherwise entry of just "+" or "-" would be valid.

A decimal number could either contain one decimal point, or no decimal points (if the number entered happens to be integer). If you want to check for decimal numbers, the most convenient way is to incorporate a counter, which will count the number of decimal points found as the check routine moves along the entered string. If the court exceeds one, then the entry is invalid.

Here are some program lines which can be added to the original check routine (plus line 125) to give a complete numeric input check.

```
105 LET n = 0
127 IF x$(i) = "." THEN LET
    n = n + 1: GOTO 140
150 IF n    1 THEN GOTO
    100
```

The routine is best employed as a subroutine to allow all numeric input requests to be checked. You could improve the routine by adding some user-friendly messages to tell the user that his input is invalid.

The routine is written for the Spectrum, but should work on the ZX81, apart from line 127 in which there are two statements, which must be separated for the ZX81.

COMMODORE 64 PROGRAM

Word Quiz

So you think you know the English language? This word test by George Sykes will check how well you know the definitions of certain words

This Commodore 64 program will test your knowledge of English and, hopefully improve your vocabulary at the same time.

It's a word game with an educational flavour in which the computer gives you a word and a list of four possible definitions. You must choose the correct one and type in your answer.

After you have done several, the computer will give your overall score and the correct solutions so that you can tell how good (or bad) your English vocabulary is.

Use it if you dare!

Variables

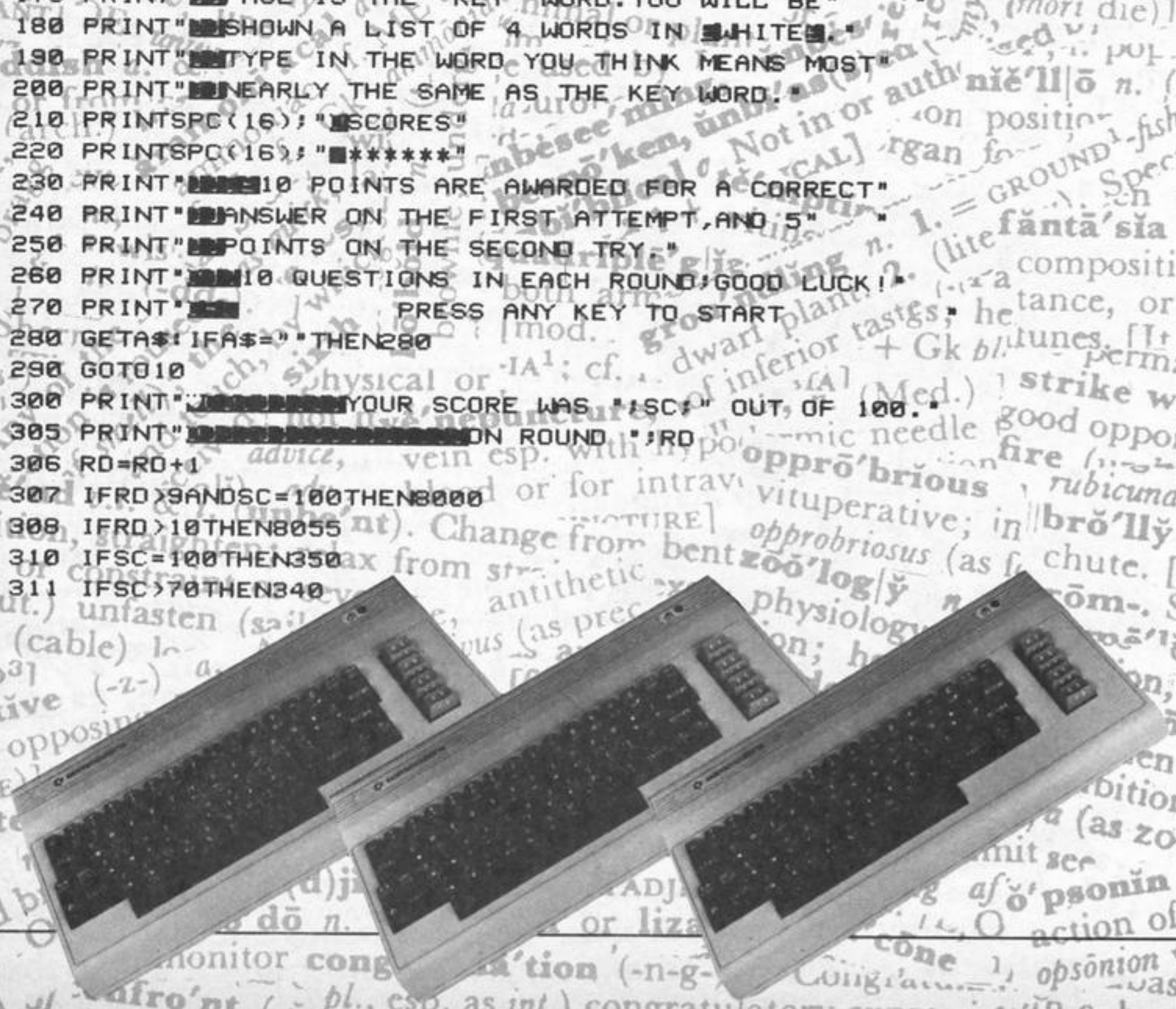
- **AS** questions
- **BS** answers
- **CS,DS,ES** dummy answers
- **RD** round number
- **Q** question number
- **SC** score
- **X** data read
- **N** choice of alternative answer position
- **T** time delay loops

How it works

- **5** clears screen, sets border blue, screen yellow
- **10-25** dim arrays, read data
- **28-35** set round, question to 1, score to 0
- **40-45** display score, round and question numbers
- **50-70** select and print questions and answers
- **100-290** title, instructions
- **300-390** display scores, end of round message
- **1000-990** data
- **2000-5090** determine order of answers presented
- **6000-7000** answer correct
- **8000-8080** end game

Note: when typing in the listing, lines 2000-2090 need only be typed once. Then overtype the first digit with 3,4 etc. and change the order of B,C,D, and E$. This saves a lot of time and provides the four Answer Position routines for little more effort than one.

```
 1 REM*********WORDWISE************
 2 REM****G.D.SYKES+M.A.EYRE*******
 3 REM********JULY 1984************
 4 REM****(CLR)*******
 5 PRINT"■":POKE53280,6:POKE53281,7
 7 GOTO100
 10 DIMA$(100),B$(100),C$(100),D$(100),E$(100)
 15 FORY=0TO99
 20 READA$(Y),B$(Y),C$(Y),D$(Y),E$(Y)
 25 NEXTY
 28 RD=1
 30 Q=1:SC=0
 35 X=(RD-1)*10
 39 REM**(CLR)(1*CRSR DOWN,2*CSR RIGHT,CTRL+7)
 40 PRINT"■■■■SCORE                ROUND          QUESTION"
 44 REM*(3*CSR RIGHT)(13*CSR RIGHT)(12*CSR RIGHT)*
 45 PRINT"■■■■";SC;"■■■■■■■■■■■■■■■■";RD;"■■■■■■■■■■■■";Q
 50 N=INT(RND(1)*4)+1
 55 ONNGOTO2000,3000,4000,5000
 65 FORT=1TO1000:NEXTT:Q=Q+1:IFQ>10THEN300
 70 GOTO40
 100 PRINT"■■";SPC(15);"**********"
 110 PRINTSPC(15);"*■WORDWISE■*"
 120 PRINTSPC(15);"**********"
 130 PRINTSPC(15);"■MOGGIESOFT"
 140 PRINTSPC(15);"■***■1984■***"
 150 PRINTSPC(15);"**********"
 159 REM**(2*CSR RIGHT)(1*CSR DOWN)(CTRL+1)(CTRL+3)**
 160 PRINT"■■■■THE WORD IN ■BLACK ■AT THE TOP OF THE"
 170 PRINT"■■PAGE IS THE 'KEY' WORD.YOU WILL BE"
 180 PRINT"■■SHOWN A LIST OF 4 WORDS IN ■WHITE■."
 190 PRINT"■■TYPE IN THE WORD YOU THINK MEANS MOST"
 200 PRINT"■■NEARLY THE SAME AS THE KEY WORD."
 210 PRINTSPC(16);"■SCORES"
 220 PRINTSPC(16);"■******"
 230 PRINT"■■■■10 POINTS ARE AWARDED FOR A CORRECT"
 240 PRINT"■■ANSWER ON THE FIRST ATTEMPT,AND 5"
 250 PRINT"■■POINTS ON THE SECOND TRY."
 260 PRINT"■■■10 QUESTIONS IN EACH ROUND;GOOD LUCK!"
 270 PRINT"■■■          PRESS ANY KEY TO START"
 280 GETA$:IFA$=""THEN280
 290 GOTO10
 300 PRINT"■■■■■■■■YOUR SCORE WAS ";SC;" OUT OF 100."
 305 PRINT"■■■■■■■■■■■■■■■■■■■■ON ROUND ";RD
 306 RD=RD+1
 307 IFRD>9ANDSC=100THEN8000
 308 IFRD>10THEN8055
 310 IFSC=100THEN350
 311 IFSC>70THEN340
```



64 PROGRAM

```
312 IFSC>50THEN330
313 IFSC>30THEN320
315 PRINT"[SPACE]NOT TOO GOOD.MAYBE YOU NEED PRACTICE.":GOTO360
320 PRINT"[SPACE]FAIR.TRY HARDER NEXT TIME!":GOTO360
330 PRINT"[SPACE]VERY GOOD!KEEP TRYING,YOU'LL IMPROVE.":GOTO360
340 PRINT"[SPACE]GREAT!BET YOU CAN MAKE 100 NEXT TIME.":GOTO360
350 PRINT"[SPACE]TERRIFIC!!CAN YOU DO IT AGAIN?"
360 IFRO>10THEN8055
365 PRINT"[SPACE]GO ON TO NEXT ROUND(Y/N)?"
370 GETA$:IFA$=""THEN370
380 IFA$="Y"THEN30
390 IFA$="N"THEN8040
400 GOTO360
1000 DATABALL,SPHERE,CONE,PYRAMID,CUBE
1010 DATATOME,BOOK,GRAVE,SOUND,BIOGRAPHY
1020 DATAMAIM,CRIPPLE,SEA,MOST,ANGER
1030 DATAGRIME,DIRT,ILLEGAL,FOREBODING,SEA
1040 DATAALIEN,FOREIGN,FRIEND,LEND,PASSAGE
1050 DATALUCRE,MONEY,RUST,SHINE,HATE
1060 DATAALIAS,NICKNAME,SORRY,GLOBE,MAP
1070 DATASPINE,BACKBONE,ROTATE,LASH,GROOVED
1080 DATAREFUND,REIMBURSE,DENY,BORROW,ALLOW
1090 DATABERATE,SCOLD,DEVALUE,POOR,ANGRY
1100 DATAPREVARICATE,QUIBBLE,CHEAT,REFUSE,DISOBEY
1110 DATAMORSEL,PIECE,HUMAN,SHELLFISH,TINY
1120 DATASARSEN,BOULDER,TANK,WARRIOR,VINEGAR
1130 DATAPURGE,CLEAN,EXITE,FLOOD,SPEND
1140 DATADEFER,POSTPONE,ADMIT,DENY,RECOMEND
1150 DATADEFRAY,REPAY,WEAR,ENEMY,BATTLE
1160 DATACOPPICE,WOOD,CATCH,GARMENT,ROCK
1170 DATASHALLOP,BOAT,ONION,PRETENDER,SPILL
1180 DATANOSTRUM,MEDICINE,NOSE,JOKE,FORMULA
1190 DATAPAGENT,CARNIVAL,DESIGNED,TRADEMARK,ATTENDANT
1200 DATAREVEL,PARTY,DISCLOSE,TANGLE,DOORWAY
1210 DATARUNCIBLE,SPOON,FURNACE,COMICAL,RUSTPROOF
1220 DATAMALLET,HAMMER,BIRD,HATRED,SEED
1230 DATACLAUSE,PROVISO,NAILS,CONTRACT,MESSAGE
1240 DATAINFIRM,WEAK,EMPLOYED,COLLAPSING,TELL
1250 DATAMEDIOCRE,INDIFFERENT,DOCTOR,ANCIENT,UNHAPPY
1260 DATAMAXIM,TRUTH,JAWBONE,AVERAGE,GREATEST
1270 DATAMASTIFF,DOG,HUGE,RIGID,MOUNTAIN
1280 DATAENTICE,ATTRACT,COMPLETE,DOORWAY,FRIENDSHIP
1290 DATAADAGE,PROVERB,EXTRA,COUNTING,TOOL
1300 DATAINDIGENOUS,NATIVE,PARTLY,ANNOYED,DISEASED
1310 DATAMENDICANT,BEGGAR,RELIGOUS,SORROWFUL,ENGINEER
1320 DATAMANNEQUIN,MODEL,DANCE,CLOWN,CIGAR
1330 DATADUNGAREE,OVERALLS,COMPOST,TENT,SOLDIER
1340 DATAOCCIDENTAL,WESTERN,MISHAP,NEARBY,GEOMETRY
1350 DATAMUSCAT,GRAPE,GUN,TRAITOR,FISH
1360 DATAMUNGO,CLOTH,DANCE,HEADDRESS,DUMB
1370 DATAFISSURE,OPENING,EXPLOSION,CHEMISTRY,FIGHTING
1380 DATAORDINANCE,DECREE,ARTILLERY,MAPS,ELECTED
1390 DATACONSTRAINT,COMPULSION,FIRMNESS,COMPRESS,UPSET
1400 DATAAMPLITUDE,RANGE,ABILITY,HAPPINESS,LOUDER
1410 DATAWAINSCOT,PANNELING,GARMENT,PAINTER,CHILD
1420 DATATURGID,SWOLLEN,LAZY,CONFUSED,MURKY
1430 DATAFLORA,PLANTS,MARGARINE,LUMINOUS,FOUNTAIN
1440 DATAEXTANT,EXISTING,PROLONGED,INACTIVE,DEAD
1450 DATARECALCITRANT,UNRULY,STUBBORN,AGGRESIVE,WITHDRAWN
```

```
1460 DATAPETULANT,PEEVISH,HANGING,TRIVIAL,UNHAPPY
1470 DATAFLAMBOYANT,SHOWY,EXAGGERATED,BURNING,FLOATABLE
1480 DATATRENCHANT,INCISIVE,GREADY,NIMBLE,FIXED
1490 DATAANNULAR,CIRCULAR,YEARLY,ABOLISH,SALARY
1500 DATAULTRAMARINE,COLOUR,UNDERWATER,SAILOR,SKYLINE
1510 DATALOMBARD,GERMAN,CANNON,BANKER,RIDICULE
1520 DATAPHLEGMATIC,SLUGISH,ANNOYED,IRRITABLE,GENEROUS
1530 DATACALABASH,GOURD,WATERHOLE,PRISON,CARAVAN
1540 DATACALUMNY,SLANDER,DISASTER,WASTE,DISLIKE
1550 DATAFLUNKEY,SERVANT,FEARFULL,REFUSAL,WARDEN
1560 DATABEAGLE,HOUND,CLERGYMAN,SIGNAL,BRACELET
1570 DATAIMPEND,HANG,OVERLAP,SKEWER,DISTRUST
1580 DATAMATTOCK,TOOL,BED,SAILOR,THREATEN
1590 DATACONTROVERT,DISPUTE,OPPOSITE,MODIFY,OUTGOING
1600 DATATARPON,FISH,CANVAS,PLANT,ELEMENT
1610 DATABUCOLIC,RUSTIC,PLAGUE,CHEERFULL,INDIGESTION
1620 DATAATROPHY,WASTING,WARFARE,BLUNDER,PRIZE
1630 DATACONFLAGRATION,FIRE,DISPUTE,FLOODING,REVOLUTION
1640 DATACOUNTERPOINT,MELODY,NEEDLEWORK,BALANCE,ARGUMENT
1650 DATASURPLICE,VESTMENT,EXTRA,WASTAGE,ABUNDANT
1660 DATASTATUTE,LAW,SCULPTURE,UNMOVING,HEIGHT
1670 DATARUBICUND,RUDDY,RIVER,STOUT,GAME
1680 DATAFRATERNITY,BROTHERHOOD,FATHERHOOD,SISTERHOOD,MOTHERHOOD
1690 DATAGARRET,ATTIC,GEMSTONE,THEATRE,EXECUTE
1700 DATAEMBROCATION,LINIMENT,PRAYER,INVOLVEMENT,PLEADING
1710 DATAEMANCIPATE,FREE,STARVE,IMPOVRISH,EXPECTATION
1720 DATAEMERITUS,RETIRED,HONORARY,DISTINGUISHED,ABRASIVE
1730 DATAPRAGMATIC,MEDDLESOME,UNCONCERNED,USEFULL,STOIC
1740 DATASLEIGHT,DEXTERITY,INSUBSTANTIAL,IGNORE,SLIM
1750 DATASIBILANT,HISSING,BROTHER,SILENTLY,UNKNOWING
1760 DATAQUERULOUS,COMPLAINING,INQUIRING,UNBELEVING,DISDAINFULL
1770 DATASTRINGENT,RIGOROUS,STINGING,LOUD,ANNOYING
1780 DATASARCOPHAGUS,COFFIN,WINDPIPE,GRECIAN,PYRAMID
1790 DATAGRILSE,FISH,CARTILAGE,MUSCLE,GRATING
1800 DATAIDIOSYNCRASY,PECULIARITY,COLLOQUIAL,INSTABILITY,PEVERSITY
1810 DATAPERSONABLE,HANDSOME,IMPORTANT,IMITATION,LIKEABLE
1820 DATAADDUCE,CITE,SOLVE,COMPUTE,PERSUADE
1830 DATAPRECEDENCE,PRIORITY,TRADITION,ADVANTAGE,CEREMONY
1840 DATAPROFLIGATE,WASTEFULL,ABUNDANT,EXPANSIVE,PUNISH
1850 DATAMANIFEST,REVEAL,OBVIOUS,INSINUATE,PLAUSIBLE
1860 DATAEVANESCENT,FLEETING,SPARKLING,TYPICAL,COLOURFUL
1870 DATAPIOUS,DEVOUT,POOR,POMPOUS,CHARITABLE
1880 DATAPIROUGE,CANOE,STEAL,EXPLORE,HAIRSTYLE
1890 DATAMEGALITH,STONE,DINOSAUR,FOSSIL,BUILDING
1900 DATAOCULIST,OPTICIAN,PSYCHIC,MUSICIAN,DISSENTER
1910 DATAMARMOSET,MONKEY,BAT,SQUIRREL,DOORMOUSE
1920 DATABROUGHAM,CARRIAGE,CLOTH,POLITICIAN,HORSE
1930 DATAPINCHBECK,COUNTERFEIT,RESTRICTED,IMPOVERISHED,STREAM
1940 DATADERRICK,CRANE,CASTAWAY,BARGE,PYLON
1950 DATALACONIC,BRIEF,DROWSY,DISINTERESTED,LAZY
1960 DATAKUDOS,GLORY,ANTELOPE,DECEIT,WINE
1970 DATASHEEPSHANK,KNOT,MEAT,WALKER,FRAUD
1980 DATAKILDERKIN,BARREL,JACKET,PURSE,FAIRY
1990 DATAESPADRILLE,SHOE,DANCE,SPANISH,FENCING
1999 REM*(1*CRSR RT,2*CRSR DW,CTRL+7)**(CTRL+3,RVS ON)**(RVS OFF,CTRL+7)**
2000 PRINT"■■■■WHAT IS THE WORD ■■NEAREST■ IN MEANING TO"
2005 PRINT"■■■■■■■■■■■■■■■■■■■■";A$(X)
2010 PRINT"■■■■■■■■■■■■■■■■■■■■";B$(X)
2020 PRINT"■■■■■■■■■■■■■■■■■■■■";C$(X)
```

64 PROGRAM

```
2030 PRINT"■■■■■■■■■■■■■■■■■■■■";D$(X)
2040 PRINT"■■■■■■■■■■■■■■■■■■■■";E$(X)
2050 INPUT"■■■■THE WORD IS ";R$
2060 IFR$=B$(X)THEN6000
2070 INPUT"■■NO.GO AGAIN ";S$
2080 IFS$=B$(X)THEN7000
2090 PRINT"■■■■■WRONG. THE WORD IS■ ";B$(X):X=X+1:GOTO65
2999 REM*(1*CRSR RT,2*CRSR DW,CTRL+7)**(CTRL+3,RVS ON)**(RVS OFF,CTRL+7)**
3000 PRINT"■■■■WHAT IS THE WORD ■■NEAREST■■ IN MEANING TO"
3005 PRINT"■■■■■■■■■■■■■■■■■■■■";A$(X)
3010 PRINT"■■■■■■■■■■■■■■■■■■■■";C$(X)
3020 PRINT"■■■■■■■■■■■■■■■■■■■■";D$(X)
3030 PRINT"■■■■■■■■■■■■■■■■■■■■";E$(X)
3040 PRINT"■■■■■■■■■■■■■■■■■■■■";B$(X)
3050 INPUT"■■■■THE WORD IS ";R$
3060 IFR$=B$(X)THEN6000
3070 INPUT"■■NO.GO AGAIN ";S$
3080 IFS$=B$(X)THEN7000
3090 PRINT"■■■■■WRONG. THE WORD IS■ ";B$(X):X=X+1:GOTO65
3390 PRINT"■■■■■WRONG. THE WORD IS ";B$(X):RETURN
3999 REM*(1*CRSR RT,2*CRSR DW,CTRL+7)**(CTRL+3,RVS ON)**(RVS OFF,CTRL+7)**
4000 PRINT"■■■■WHAT IS THE WORD ■■NEAREST■■ IN MEANING TO"
4005 PRINT"■■■■■■■■■■■■■■■■■■■■";A$(X)
4010 PRINT"■■■■■■■■■■■■■■■■■■■■";D$(X)
4020 PRINT"■■■■■■■■■■■■■■■■■■■■";E$(X)
4030 PRINT"■■■■■■■■■■■■■■■■■■■■";B$(X)
4040 PRINT"■■■■■■■■■■■■■■■■■■■■";C$(X)
4050 INPUT"■■■■THE WORD IS ";R$
4060 IFR$=B$(X)THEN6000
4070 INPUT"■■NO.GO AGAIN ";S$
4080 IFS$=B$(X)THEN7000
4090 PRINT"■■■■■WRONG. THE WORD IS■ ";B$(X):X=X+1:GOTO65
4999 REM*(1*CRSR RT,2*CRSR DW,CTRL+7)**(CTRL+3,RVS ON)**(RVS OFF,CTRL+7)**
5000 PRINT"■■■■WHAT IS THE WORD ■■NEAREST■■ IN MEANING TO"
5005 PRINT"■■■■■■■■■■■■■■■■■■■■";A$(X)
5010 PRINT"■■■■■■■■■■■■■■■■■■■■";E$(X)
5020 PRINT"■■■■■■■■■■■■■■■■■■■■";B$(X)
5030 PRINT"■■■■■■■■■■■■■■■■■■■■";C$(X)
5040 PRINT"■■■■■■■■■■■■■■■■■■■■";D$(X)
5050 INPUT"■■■■THE WORD IS ";R$
5060 IFR$=B$(X)THEN6000
5070 INPUT"■■NO.GO AGAIN ";S$
5080 IFS$=B$(X)THEN7000
5090 PRINT"■■■■■WRONG. THE WORD IS■ ";B$(X):X=X+1:GOTO65
6000 PRINT"■■■■■■■■■■■■■■■■■■■■CORRECT! 10 POINTS ":SC=SC+10:X=X+1:GOTO65
7000 PRINT"■■■■■■■CORRECT!2 TRIES,SO ONLY 5 POINTS":SC=SC+5:X=X+1:GOTO65
8000 PRINT"J■■■■■■■■■■AMAZING! A SCORE OF 100%"
8010 PRINT"■■■■■■■■■■■■■■■■ON ROUND TEN."
8020 PRINT"■■■■■■I THINK YOU SHOULD REWARD YOURSELF"
8030 PRINT"■■■■■■WITH A GAME OF 'SPACE INVADERS.'
8040 PRINT"■■■■■■■■■■■■■■■THANKS FOR PLAYING."
8050 PRINT"■■■■■■■■■■■■■■■BYE FOR NOW!....."
8051 END
8055 PRINT"■■■■■■■■■■■■■■■■■■■■■■**********"
8060 PRINT"■■■■■■■■■■■■■■■■■■■■■*■GAME OVER■■*"
8065 PRINT"■■■■■■■■■■■■■■■■■■■■■■**********"
8070 PRINT"■■■■■■■■■■■■YOU DID VERY WELL THAT TIME!"
8075 PRINT"■■■■■■NOW YOU HAVE SEEN ALL 100 QUESTIONS,"
8080 PRINT"■■■■YOU WILL SCORE EVEN HIGHER NEXT TIME.":GOTO8040
```

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How it works

9-130 opening display
140-300 information (choosing castle and strength)
321-354 information: which monster you have found, how many points you both have, and how much money you have
355-392 asks what you wish to do: run, fight or bribe
400-471 bribe subroutine
500-580 fight subroutine, how much money the monster has
610-670 running subroutine
1012-1200 extra finds which are not monsters
3020-3060 end of game choice: play again or not
9000-9030 running out of power points, end of game
9500-9520 running out of money routine
9998-9999 save game and run it on loading

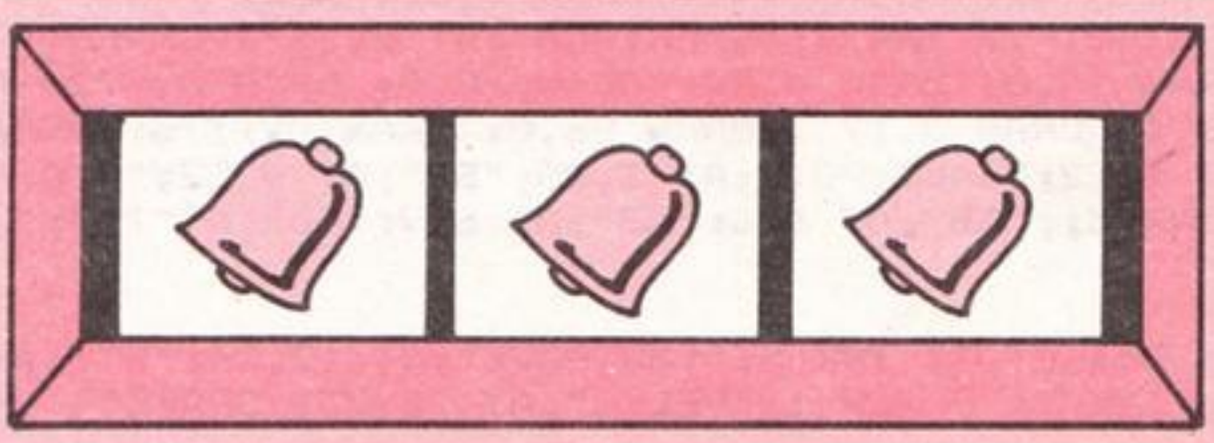
```
 9 FOR I=1 TO 10
 10 PRINT AT 0,6;"
 "
 20 PRINT AT 1,6;"
 "
 30 PRINT AT 2,6;"
 "
 40 PRINT AT 3,6;"
 "
 50 PRINT AT 4,6;"
 "
 60 PRINT AT 5,6;"
 "
 70 PRINT AT 6,6;"
 "
 80 PRINT AT 7,6;"   THE   STEP
S
 90 PRINT AT 8,6;"
 "
 91 PRINT AT 9,5;"
 "
 92 PRINT AT 10,5;"
 "
 93 PRINT AT 11,5;"
 "
 100 SCROLL
 112 PRINT AT 21,0;"     BY-ALIST
AIR.I.MACDONALD      "
 120 NEXT I
 130 CLS
 140 PRINT "              THE STEPS
"
 150 PRINT
 160 PRINT "    ""STEPS"" IS AN A
DVENTURE GAME.YOU PLAY THE PART
OF ""WALLY"",AN ELFIN BOUNTY HUN
TER."
 161 LET X=INT (RND*4)+1
 162 IF X=1 THEN LET A$="DARKNES
S"
  163 IF X=2 THEN LET A$="EVIL"
  164 IF X=3 THEN LET A$="DEATH"
  165 IF X=4 THEN LET A$="MUTANTS
"
  169 LET F=100
  170 PRINT "     WALLY HAS ENTERED
 THE CASTLE OF ";A$;" AND MUST R
EACH THE TOP TO COLLECT THE LOOT
."
  180 PRINT "    ON HIS WAY HE WIL
L MEET STRANGE CREATURES WHO HE
MUST FIGHT,BRIBE OR RUN AWAY FRO
M."
  181 LET S=INT (RND*4000)+1
  182 IF S<2000 THEN GOTO 181
  190 PRINT "    HE HAS A POWER RI
NG WHICH GIVES HIM ";S;" STRENGT
H.ON HIS WAY,THE MONSTERS THAT H
E MEET WILL HAVE CERTAIN AMOUNTS
 OF TREASURE."
  195 PRINT "IF HE BEATS ""EM UP,
HE CAN HAVE THE TREASURE."
  196 PRINT "(YOU HAVE £100. TO S
TART WITH,  COS THE AUTHOR""S DE
AD KIND.)"
  200 PRINT AT 21,0;"PRESS ANY KE
Y TO PLAY"
  210 IF INKEY$="" THEN GOTO 210
  220 PRINT AT 19,11;"[GOOD LUCK]"
  240 FOR I=1 TO 50
  250 NEXT I
  260 FOR I=1 TO 22
  270 SCROLL
  300 NEXT I
  310 LET I=1
  320 SCROLL
  321 PRINT "[YOU ARE ON STEP ]";I
  322 SCROLL
  323 PRINT "YOU HAVE ";S;" STREN
GTH AND £";F
  324 LET I=I+1
  325 LET S=S-5
  326 IF I=100 THEN SCROLL
  327 IF I=100 THEN PRINT "1 STEP
 TO GO."
  328 IF S<1 THEN GOTO 9000
  329 IF F<1 THEN GOSUB 9500
  330 LET X=INT (RND*10)+1
  331 IF I>100 THEN GOTO 7000
  340 IF X=1 THEN LET B$="A VAMPI
RE"
  341 IF X=2 THEN LET B$="A WEREW
OLF"
  342 IF X=3 THEN LET B$="A GIANT
 SLUG"
```

ZX81 PROGRAM

```
 343 IF X=4 THEN LET B$="A BANK
MANAGER"
 344 IF X=5 THEN LET B$="A DWARF
"
 345 IF X=6 THEN LET B$="A WIZAR
D"
 346 IF X=7 THEN LET B$="YOUR WI
FE"
 347 IF X=8 THEN LET B$="A FAIRY
"
 348 IF X=9 THEN LET B$="A TREE"
 349 IF X=10 THEN LET B$="SUPERM
AN"
 351 IF X=8 OR X=10 THEN GOTO 10
00
 352 IF X=9 THEN GOTO 1100
 353 SCROLL
 354 PRINT "YOU HAVE FOUND ";B$
 355 SCROLL
 356 PRINT "WILL YOU:"
 357 SCROLL
 358 PRINT "FIGHT,RUN OR BRIBE?"
 361 SCROLL
 370 PRINT "INPUT F,R OR B"
 371 INPUT V$
 373 IF V$="B" AND F<1 THEN GOTO
 361
 380 IF V$="F" THEN GOTO 500
 390 IF V$="R" THEN GOTO 600
 391 IF V$="B" THEN GOTO 400
 392 IF V$="" THEN GOTO 371
 400 SCROLL
 401 PRINT "HOW MUCH WILL YOU BR
IBE?"
 410 INPUT A
 420 LET D=INT (RND*100)+1
 430 IF D<40 THEN GOTO 420
 441 SCROLL
 443 IF A>D THEN PRINT "PHEW,YOU
 JUST GOT OUT OF THAT."
 450 IF A<D THEN SCROLL
 451 IF A<D THEN PRINT "YOU GREA
T IDIOT,YOU""VE JUST "
 452 IF A<D THEN SCROLL
 453 IF A<D THEN PRINT "INSULTED
 THAT MONSTER,IT""S TAKEN"
 454 IF A<D THEN SCROLL
 455 IF A<D THEN PRINT "£100."
 460 IF A>D THEN LET F=F-A
 470 IF A<D THEN LET F=F-(100+A)
 471 GOTO 320
 500 LET G=INT (RND*100)+1
 501 IF G<40 THEN GOTO 500
 510 SCROLL
 511 PRINT "THIS MONSTER HAS ";G
" POWER"
 512 SCROLL
 513 PRINT "POINTS,HOW MANY WILL
YOU USE?"
 514 SCROLL
 515 LET Q=INT (RND*7)+1
 516 IF Q=3 THEN SCROLL
 517 IF Q=3 THEN PRINT "P.S,HEAD
BANGING IT WON""T HELP."
 518 SCROLL
 519 LET T=INT (RND*200)+1
 520 IF T<50 THEN GOTO 519
 521 PRINT "IT ALSO HAS £";T;"."
 524 INPUT M
 525 LET Q=INT (RND*2)+1
 526 LET V=INT (RND*30)+1
 529 SCROLL
 530 IF M>G*2-V AND Q=1 THEN PRI
NT "YOU SURE ARE MEATY."
 531 IF Q=1 THEN SCROLL
 540 IF M>G*2-V AND Q=2 THEN PRI
NT "OK HE-MAN,DON""T SHOW OFF."
 541 IF M>G*2-V THEN LET F=F+T
 542 IF M>G AND M<G*2-V THEN PRI
NT "THAT MONSTER GAVE YOU A DIRT
Y "
 543 SCROLL
 544 IF M>G AND M<G*2-V THEN PRI
NT "KICK AND STOLE SOME MONEY."
 545 IF M>G AND M<G*2 THEN LET F
=F-50
 550 IF M<G THEN SCROLL
 551 IF M<G THEN PRINT "THAT MON
STER SMASHED YOU."
 552 IF M<G THEN GOTO 3020
 555 LET S=S-M
 560 SCROLL
 580 GOTO 320
 610 LET K=INT (RND*2)+1
 611 LET S=S-10
 620 SCROLL
 621 IF K=1 THEN PRINT "YOU ARE
CORNERED,YOU CAN ONLY"
 622 IF K=1 THEN SCROLL
 623 IF K=1 THEN PRINT "FIGHT NO
W."
 630 IF K=1 THEN GOTO 500
 660 PRINT "YOU GOT AWAY."
 670 GOTO 320
1000 LET N=INT (RND*10)+1
1009 SCROLL
1010 PRINT B$
1011 SCROLL
1012 PRINT "HAS CARRIED YOU UP "
;N;" STEPS."
1020 LET I=I+N
1030 GOTO 320
1100 SCROLL
1101 PRINT "YOU HAVE FOUND A TRE
E"
1102 SCROLL
1110 PRINT "   LUCKY YOU,ELVES E
AT TREES,"
1111 SCROLL
1112 PRINT "HAVE A FEAST,AND IMP
ROVE YOUR "
1113 SCROLL
1114 PRINT "STRENGTH AT THE SAME
 TIME."
1115 LET S=S+50
1200 GOTO 320
3020 SCROLL
3021 SCROLL
3022 SCROLL
3023 SCROLL
3027 PRINT "WANT TO TRY AGAIN? (
Y/N)"
3028 SCROLL
3029 LET D$=INKEY$
3030 IF D$="Y" THEN CLS
3031 IF D$="Y" THEN RUN
3040 IF D$="N" THEN PRINT "OK,BY
E"
3050 IF D$="" THEN GOTO 3029
3060 STOP
7000 SCROLL
7001 PRINT "WELL DONE,YOU HAVE R
EACHED THE "
7002 SCROLL
7003 PRINT "TOP OF THE CASTLE,YO
U HAVE FOUND"
7004 SCROLL
7005 PRINT "THE LOOT.YOU FINISHE
D YOUR QUEST"
7006 SCROLL
7010 PRINT "WITH ";S;" POWER POI
NTS LEFT AND"
7015 SCROLL
7020 PRINT "£";F;".LEFT"
7030 SCROLL
8010 PRINT "SUPREME RICHES ARE Y
OURS."
8020 GOTO 3020
9000 SCROLL
9010 PRINT "YOU HAVE RUN OUT OF
POWER POINTS"
9015 SCROLL
9020 PRINT "YOU ARE DEAD"
9030 GOTO 3020
9500 SCROLL
9501 PRINT "YOU HAVE RUN OUT OF
DOUGH TOUGH"
9509 SCROLL
9510 PRINT "LUCK."
9511 SCROLL
9515 PRINT "NO MORE BRIBING FOR
A BIT"
9520 RETURN
9998 SAVE "STEP■"
9999 RUN
```

Hit the jackpot!

Andew Bird's fruit machine game gives you the chance to gamble with your holiday money without hurting your pocket



This game is based on the fruit machines which are a familiar sight to everyone. The only difference with this program is that you don't have to risk any money to enjoy yourself.

The object of the game is to obtain a line which has either two or three fruit characters the same in order to win. It's a bit more expensive than normal fruit machines however since each go costs £1.

You are armed with your holiday money and you must decide how much of it you are prepared to risk on the game. If you lose it all you can forget about endless days on a sun baked beach!

There are only two keys to be used with this program. They are: Break space — for each go, and E — to exit the game when you think that your winning streak is running out.

How it works

5-26 variables etc.
30-150 draw game
200-500 main loop for each go
1000-1200 fruit machine's spinning and select routine
2000-2160 check for winning line
3000-3080 pay out for win
4000-4030 end of game routine
5000-5100 pull lever routine
6000-6030 lost all money routine
7000-7200 instructions
9000-9090 graphics

Variables

cash your money
win amount for winning line
f$ fruit characters
g$ instructions for next go
Dim i, Dim B ink colour, brighness of fruit
x,y,z select which fruit displayed
p used in money pay out routine
f used in general purpose loops
m,n position of money payed out

Listing

```
  1 REM  Jackpot   By A.G.Bird
  2 PRINT AT 10,10;"Please Wait": POKE 23609,30
  3 GO SUB 9000
  4 GO SUB 7000
  5 LET win=0
  6 RANDOMIZE
 10 LET f$="MNOPQROPCDEFAB▬▬GHEFIJKL"
 12 LET g$="           PRESS 'SPACE' FOR NEXT GO .. OR (E) TO END          "
 15 DIM i(21): DIM b(21)
 20 LET i(1)=2: LET i(5)=3: LET i(9)=4: LET i(13)=5: LET i(17)=6: LET i(21)=7
 24 FOR f=1 TO 9: LET b(f)=1: NEXT f
 26 FOR f=13 TO 21: LET b(f)=0: NEXT f
 29 REM  Draw game
 30 PLOT 1,7: DRAW 0,151: DRAW 15,15: DRAW 80,0: DRAW 15,-15: DRAW 0,-151: DRAW
-110,0
 40 DRAW 15,24: DRAW -8,64: DRAW 0,49: DRAW 96,0: DRAW 0,-49: DRAW -8,-64: DRAW
15,-24: DRAW 0,-7: DRAW -110,0: DRAW 0,7
 50 PLOT 16,32: DRAW 80,0: PLOT 8,95: DRAW 96,0: DRAW -14,14: DRAW -68,0: DRAW
-14,-14
 60 PLOT 8,144: DRAW 14,-14: DRAW 68,0: DRAW 14,14
 70 PLOT 22,109: DRAW 0,20: PLOT 43,109: DRAW 0,20: PLOT 68,109: DRAW 0,20: PLO
T 90,09: DRAW 0,20
 80 FOR f=32 TO 80 STEP 12: PLOT f,40: DRAW 0,32: NEXT f
 90 PRINT AT 1,3; BRIGHT 1; INK 4;"SPECTRUM";AT 2,3;"JACK*POT"
100 PLOT 112,64: DRAW 16,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DRAW -8,0
110 INK 4: PLOT 158,1: DRAW 0,173: DRAW 96,0: DRAW 0,-173: DRAW -96,0
120 INK 6: PRINT AT 1,22;"JACK*POT";AT 3,25;"By";AT 5,22;"A.G.Bird"
130 PRINT AT 6,3; INK 5;;"AB";AT 6,6;"AB";AT 6,9;"AB";AT 7,3;"▬▬";AT 7,6;"▬▬"
;A
T 7,9;"▬▬"
140 PRINT AT 10,22; BRIGHT 1; INK 5;"YOU HAVE";AT 12,24;"#";cash
150 PRINT AT 18,23; INK 7; FLASH 1;"PRESS";AT 20,23;"SPACE"
199 REM  Main loop
200 IF INKEY$="e" THEN  GO TO 4000
205 IF INKEY$<>" " THEN  GO TO 200
210 PRINT AT 18,23;"     ";AT 20,23;"     "
220 LET cash=cash-1
230 PRINT AT 12,24; BRIGHT 1; INK 5;"#";cash;" "
235 GO SUB 5000
240 GO SUB 1000: GO SUB 2000
250 IF win>0 THEN  GO SUB 3000
260 IF win=0 THEN  FOR f=1 TO 50: NEXT f: GO TO 400
270 LET cash=cash+win
280 PRINT AT 12,25; BRIGHT 1; INK 5;cash
290 PRINT AT 16,22; INK i(x); BRIGHT b(x);f$(x TO x+1);AT 17,22;f$(x+2 TO x+3)
300 PRINT AT 16,25; INK i(y); BRIGHT b(y);f$(y TO y+1);AT 17,25;f$(y+2 TO y+3)
310 PRINT AT 16,28; INK i(z); BRIGHT b(z);f$(z TO z+1);AT 17,28;f$(z+2 TO z+3)
320 PRINT AT 19,22; INK 6;"WINS #";win
330 FOR f=20 TO 30: BEEP .02,f: BEEP .02,f+5: BEEP .02,f+10: BEEP .02,f+15: PAU
SE f/8: NEXT f
340 FOR f=1 TO 300: NEXT f
350 FOR f=16 TO 20: PRINT AT f,22;"          ": NEXT f
360 FOR f=18 TO 20: PRINT AT f,2;"           ": NEXT f
400 IF cash=0 THEN  GO TO 6000
410 FOR f=1 TO LEN g$-9: PRINT AT 18,21; INK 7;g$(f TO f+9): BEEP .07,-50: NEXT
f
500 GO TO 200
999 REM  Fruit machine working
1000 LET x=(INT (RND*6))*4+1
1005 IF RND>.85 THEN  LET y=x: GO TO 1015
1010 LET y=(INT (RND*6))*4+1
1015 IF RND>.75 THEN  LET z=y: GO TO 1040
1020 LET z=(INT (RND*6))*4+1
1040 FOR n=1 TO 15
1050 PRINT AT 6,3; INK RND*7;"SS";AT 6,6; INK RND*7;"SS";AT 6,9; INK RND*7;"SS"
1060 PRINT AT 7,3; INK RND*7;"SS";AT 7,6; INK RND*7;"SS";AT 7,9; INK RND*7;"SS"
1070 BEEP .01,-20: NEXT n
1080 PRINT AT 6,3; INK i(x); BRIGHT b(x);f$(x TO x+1);AT 7,3;f$(x+2 TO x+3)
```

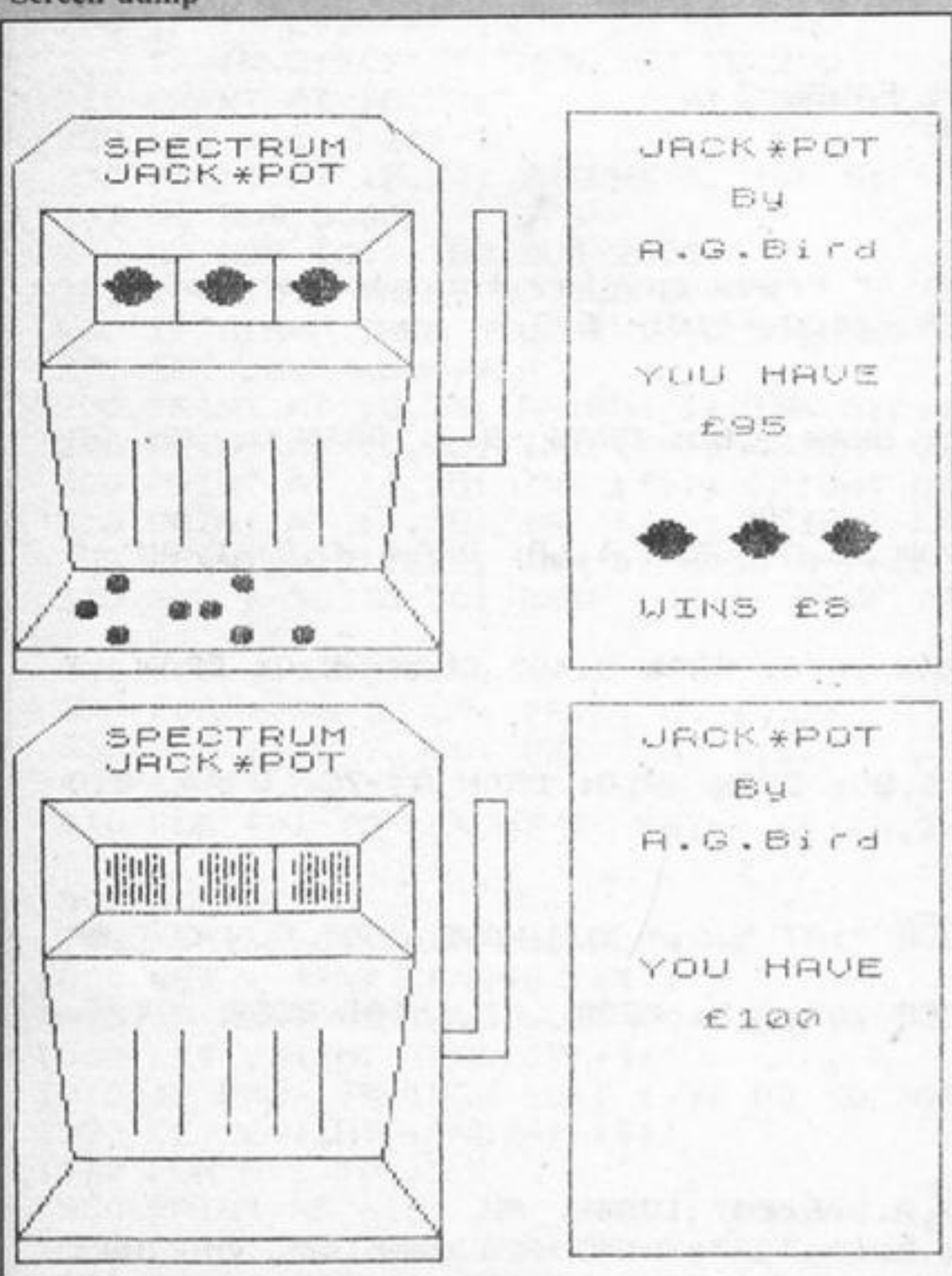
PROGRAM

```
1090 BEEP .03,-10
1095 FOR n=1 TO 15
1100 PRINT AT 6,6; INK RND*7;"SS";AT 6,9; INK RND*7;"SS"
1120 PRINT AT 7,6; INK RND*7;"SS";AT 7,9; INK RND*7;"SS"
1130 BEEP .01,-20: NEXT n
1140 PRINT AT 6,6; INK i(y); BRIGHT b(y);f$(y TO y+1);AT 7,6;f$(y+2 TO y+3)
1150 BEEP .03,-5
1155 FOR n=1 TO 15
1160 PRINT AT 6,9;RND*7;"SS";AT 7,9;"SS"
1170 BEEP .01,-20: NEXT n
1180 PRINT AT 6,9; INK i(z); BRIGHT b(z);f$(z TO z+1);AT 7,9;f$(z+2 TO z+3)
1190 BEEP .03,0
1200 RETURN
1999 REM  Check for win
2000 IF x<>y THEN  LET win=0: RETURN
2010 IF z=x THEN  GO TO 2100
2020 IF x=1 THEN  LET win=3
2030 IF x=5 THEN  LET win=4
2040 IF x=9 THEN  LET win=2
2050 IF x=13 THEN  LET win=5
2060 IF x=17 THEN  LET win=3
2070 IF x=21 THEN  LET win=4
2080 RETURN
2100 IF x=1 THEN  LET win=6
2110 IF x=5 THEN  LET win=10
2120 IF x=9 THEN  LET win=6
2130 IF x=13 THEN  LET win=30
2140 IF x=17 THEN  LET win=8
2150 IF x=21 THEN  LET win=8
2160 RETURN
2999 REM  Money
3000 FOR p=1 TO win
3020 LET m=INT (RND*3)+18
3030 LET n=INT (RND*10)+2
3040 IF ATTR (m,n)=70 THEN  GO TO 3020
3050 PRINT AT m,n; INK 6; BRIGHT 1;"T"
3060 BEEP .03,50: BEEP .02,60: BEEP .01,50: PAUSE 2
3070 NEXT p
3080 RETURN
3999 REM  Finish
4000 BORDER 4: PAPER 4: INK 0: CLS
4010 PRINT " YOU HAVE ENDED UP WITH #";cash''" Press any key for another go"
4020 FOR f=0 TO 30 STEP 2: BEEP .01,f: BEEP f/100,f+10: NEXT f
4030 PAUSE 0: GO TO 4
4999 REM  Lever
5000 INK 7: OVER 1: PLOT 112,64: DRAW 16,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DR
AW -8,0
5005 BEEP .03,-30
5010 FOR f=0 TO 1: OVER f: PLOT 112,64: DRAW 16,0: DRAW 4,68: DRAW -8,0: DRAW -4
,-60: DRAW -8,0: NEXT f
5015 BEEP .03,-30
5020 FOR f=0 TO 1: OVER f: PLOT 112,64: DRAW 16,0: DRAW 8,48: DRAW -8,0: DRAW -8
,-40: DRAW -8,0: NEXT f
5025 BEEP .03,-30
5030 OVER 0: PLOT 112,64: DRAW 16,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DRAW -8,0
5100 RETURN
5999 REM  Lost
6000 BORDER 0: PAPER 0: CLS
6010 PAPER 7: INK 1: PRINT AT 3,0;" BAD LUCK ";AT 5,0;" YOU HAVE JUST RUN OUT OF
 MONEY "
6020 FOR f=30 TO 0 STEP -1: BEEP .01,f: BEEP .02,f-5: BEEP .03,f-10: BEEP .04,f-
15: NEXT f
6030 PAUSE 500: GO TO 4
6999 REM  Instuctions
7000 BORDER 6: PAPER 6: INK 0: CLS
7010 PRINT  PAPER 1; INK 7;"   JACKPOT  By A.G.Bird. 1984   "
7020 PRINT AT 2,2;"You are on holiday and, being"''"a bit of a gambler, you deci
de"''"to tackle a one armed bandit in"''"the nearby Amusement Arcade."''"Each go
 costs #1 so how much of"''"your holiday money do you want"''"to risk"
```

SPECTRUM PROGRAM

```
7030 FOR f=0 TO 4: PLOT 111+f,44: DRAW 10,-10,-5: DRAW 0,-24: NEXT f
7040 INPUT "                # ";cash: IF cash<1 THEN  GO TO 7040
7050 BORDER 0: PAPER 0: INK 7: CLS : PRINT  PAPER 7; INK 0;"SPECTRUM JACK*POT  W
INNING LINES"
7060 FOR f=1 TO 7 STEP 3: GO SUB 7100: NEXT f
7070 FOR f=19 TO 22 STEP 3: GO SUB 7100: NEXT f
7080 GO TO 7180
7100 PRINT AT 2,f; INK 5;"AB";AT 3,f;"▬▬"
7110 PRINT AT 5,f; INK 3; BRIGHT 1;"QR";AT 6,f;"OP"
7120 PRINT AT 8,f; INK 7;"IJ";AT 9,f;"KL"
7130 PRINT AT 11,f; INK 6;"GH";AT 12,f;"EF"
7140 PRINT AT 14,f; INK 2; BRIGHT 1;"MN";AT 15,f;"OP"
7150 PRINT AT 17,f; INK 4; BRIGHT 1;"CD";AT 18,f;"EF"
7160 RETURN
7180 PRINT AT 3,13;"30";AT 6,13;"10";AT 9,13;"8";AT 12,13;"8";AT 15,13;"6";AT 18
,13;"6"
7190 PRINT AT 3,28;"5";AT 6,28;"4";AT 9,28;"4";AT 12,28;"3";AT 15,28;"3";AT 18,2
8;"2"
7200 PRINT AT 21,0;"Press any key to start the game.": PAUSE 0: CLS : RETURN
8999 REM  Graphics
9000 FOR g=65368 TO 65527: READ r: POKE g,r: NEXT g: RETURN
9010 DATA 255,0,225,146,226,147,146,226,255,0,142,73,73,206,73,73
9020 DATA 0,3,15,31,31,63,63,63,0,192,240,248,248,252,252,252
9030 DATA 63,31,31,15,3,0,0,0,252,248,248,240,192,0,0,0
9040 DATA 0,3,15,31,31,127,255,127,0,192,240,248,248,254,255,254
9050 DATA 0,0,0,0,3,15,255,255,0,56,124,254,254,254,252,248
9060 DATA 127,63,31,15,23,99,97,0,240,240,224,224,192,192,192,192
9070 DATA 28,62,121,1,0,0,0,0,0,24,62,127,128,128,128,128
9080 DATA 12,30,30,12,1,3,3,1,48,120,120,48,128,192,192,128
9090 DATA 30,33,1,1,97,243,243,97,240,8,0,0,134,207,207,134
9100 DATA 20,21,81,85,85,85,81,21,0,60,126,126,126,126,60,0
```

Screen dump



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There's also a chance that you'll get invaded by your neighbouring country.

This game has mixed text and graphics.

Variables

y year
R population
F grain
PO dyke upkeep
PC farmers
PB guards
PA soldiers
OY,VI,VA check for invasion

How it works

10-80 set variables
110-300 input for jobs
390-1540 graphics, main program

How it works

10-80 set variables
110-300 input for jobs
390-1540 graphics, main program

Hints on conversion

As the Dragon's language is fairly standard, conversion should be quite simple.

```
10 CLS5:PRINT@224,"THE KINGDOM OF GHELLINGE.....":SCREEN 0,1:FORT=1TO1000:NEXT
T
20 CLS
30 GOSUB1200
40 H=1274
50 R=(250+(RND(117))):F=101
60 Y=1134
70 OY=0:OB=0
71 OF=0
80 REM
90 Y=Y+1:IFY=1170 THEN1390
100 GOSUB350
110 FORT=161TO170:SOUNDT,1:NEXTT
120 CLS:PRINT@10,"          ":PRINT@10,"KINGDOM"
130 PRINT"YEAR IS ";Y:PRINT
140 PRINT"DEATHS FROM FAMINE ";OF
150 PRINT"DEATH FROM FLOOD   ";OY
160 PRINT"DEATH FROM BANDITS ";OB
170 PRINT:PRINT"POPULATION      = ";R
180 PRINT"BAGS OF GRAIN   = " ;F
190 PRINT"************************************"
200 PRINT"     DISTRIBUTION OF LABOUR"
210 PRINT"( YOU MUST USE AT LEAST ONE":PRINT"PERSON FOR EACH JOB)."
220 PRINT" POPULATION= ";R
230 INPUT"DYKE UPKEEP";PO:SOUND2,1
240 INPUT"FARMERS";PC:SOUND25,1
250 INPUT"GUARDS";PB:SOUND50,3
260 IF PO =0 ORPC=0 OR PB=0 THEN CLS:PRINT@74,"YOU MADE A MISTAKE.": PRINT"(YOU
MUST USE AT LEAST ONE":PRINT"PERSON FOR EACH JOB)." :GOTO190
270 PA=R-(PO+PB+PC)
280 IF PA<0 THEN PO=0 ANDPC=0 ANDPB=0:CLS5:PRINT:PRINT"YOU MADE A MISTAKE":PRINT
:GOTO190
290 PRINT"SOLDIERS= ";PA
300 FORA=1TO1000:NEXTA:CLS
310 GOSUB600
320 GOSUB970
330 GOTO80
340 OY=(DR/100)*R
350 VI=(R/F)*100:IFPA=0 THENPA=1
360 VA=(PA/R)*100
370 IFVI>12 ANDVI<15THEN 390
380 RETURN
```

```
390 PRINT@170,"          ";:PRINT@170,"INVASION";:FORT=1TO100 STEP25:SOUNDT,4:NEXT
T:FORA1=1TO1500:NEXTA1
400 CLS5:POKE1226,128:POKE1357,128:POKE1290,128:POKE1350,128:FORP=1025 TO(1567-3
1)STEP32:POKEP,175:NEXTP:FORP=1026TO(1567-30)STEP32:POKEP,175:NEXTP
410 FORP=1025 TO1536 STEP32:POKEP,171:POKEP,175:POKEP+32,171:POKEP+32,175:NEXTP
420 FORP=(1024+25)TO(1535-7)STEP64:POKEP,111:NEXTP:FORP=(1024+26)TO(1535-6)STEP6
4:POKEP,92:NEXTP:FORP=(1024+28)TO(1535-4)STEP64:POKEP,111:NEXTP:FORP=(1024+29)TO
(1535-3)STEP64:POKEP,92:NEXTP
430 FORP= 1034 TO 1357 STEP 32
431 POKEP-1,249:POKEP,249:POKEP+1,249:POKEP+32,249:POKEP+31,249:POKEP+33,249
432 POKEP-1,207:POKEP,207:POKEP+1,207:POKEP+32,207:POKEP+31,207:POKEP+33,207
433 NEXTP
434 POKEP-1,249:POKEP,249:POKEP+1,249:POKEP+31,249:POKEP+32,249:POKEP+33,249
440 IA1 =RND(4)
460 PA1=RND(4)
470 IF PA1>=IA1 THEN550
480 FORP=(1024+10)TO(1267)STEP32:POKEP,255:POKEP,207:NEXTP:POKEP,255
490 P=1322:POKEP,255:POKEP-32,255:POKEP+32,255:POKEP-1,255:POKEP+1,255
500 FORT=100TO200STEP25:SOUNDT,2:NEXTT
510 PRINT@128,"YOU WERE DEFEATED "
530 PLAY"CDEFG"
540 FORA1=1TO1000:NEXTA1:CLS:GOTO1331
550 PRINT@138," YOUR ARMY WON!!"
555 Q=INT(PA)+RND(75)
560 PRINT@170,"SOLDIERS LOST= ";Q
570 PLAY"04CDEFG"
580 R=R-Q:PA=0
585 IF R<0 THEN R=0
590 FOR A1=1TO2000:NEXTA1:RETURN
600 REM
610 CLS5
620 POKE1226,128
630 POKE1357,128:POKE1290,128:POKE1350,128
640 FORP=1025 TO(1567-31) STEP32:POKEP,175:NEXTP:FORP=1026TO(1567-30) STEP32:POK
EP,175:NEXTP
650 FORP=1025TO1536STEP32 :POKEP,171:POKEP,175:POKEP+32,171:POKEP+32,175
660 NEXTP
670 FORP=(1024+25)TO(1535-7)STEP64:POKEP,111:NEXTP
680 FORP=(1024+26)TO(1535-6)STEP64:POKEP,92:NEXTP:FORP=(1024+28)TO(1535-4)STEP64
:POKEP,111:NEXTP:FORP=(1024+29) TO(1535-3)STEP64:POKEP,92:NEXTP
690 PRINT@10,"          ";:PRINT@10,"*KINGDOM*";
700 FORT=150TO250STEP25:SOUNDT,3:NEXTT
710 REM
720 DA=(0+RND(2))-1
730 DB=(0+RND(2))-1
740 IF DA=1 THENPRINT@74,"          ";: PRINT@74,"BANDITS!!";
750 IFDA=0ANDDB=0 THEN GOTO 1520
760 IFDA=0 ANDDB=1 THEN GOTO1420
770  IFDA=1 AND DB=1 THEN 780
780 FORH=1274 TO(1253+RND(11))STEP-1
790 POKE H,191:POKE H,207:POKE H-1,191:POKEH-1,207:POKEH-2,191:POKEH-2,207
800 NEXTH
810 POKEH,191
820 SOUND30,1
830 FORH=1341TO(1317+RND(11))STEP-1
840 POKEH,191:POKEH,207:POKEH-1,191:POKEH-1,207:POKEH-2,191:POKEH-2,207:NEXTH:PO
KEH,191
850 SOUND35,1
860 FORH=1404TO(1383+RND(9))STEP-1:POKEH,191:POKEH,207:POKEH-1,191:POKEH-1,207:P
OKEH-2,191:POKEH-2,207:NEXTH:POKEH,191
870 SOUND40,1
880 DC=(0+RND(3)-1)
890 IFDC=0 THEN 950
900 FORN=1217 TO(1219+RND(11)) STEP1
910 POKEN,175:NEXTN
920 FORT=1313 TO(1318+RND(9)) STEP1:POKET,175:NEXTT
930 FORT=1281TO(1282+RND(8)):POKET,175:NEXTT
```

PROGRAM

```
940 FORT=1345 TO(1355+RND(7)):POKET,175:NEXTT
950 FORT=1TO2500:NEXTT
960 RETURN
970 WF=RND(1)*3
980 EA=RND(1)*4+8
990 U=EA*PC*WF
1000 AS=((R*21)/PB^2)+(RND(1)*20)
1010 IFF<0 THEN 1300
1020 F=U-(AS*U)/100
1030 OF=(((R*3.142*2)/F)/100)*R
1040 IFOF<0 THEN OF=0
1050 IFDC=0 THEN OY=0
1060 IFDC=0 THEN 1090
1070 IFDB=1THEN1080
1080 OY=INT(2+RND(112))
1090 BR=INT(RND(1)*10)+1
1100 IF DA=0THEN OB=0
1110 IFDA=0 THEN 1130
1120 OB=(BR/100)*R
1130 OF=INT(OF):OY=INT(OY):OB=INT(OB):F=INT(F)
1140 R=R-(OF+OB+OY)
1150 IFF<0 THEN 1300
1160 IFR<2 THEN 1300
1170 IFOY>0 THEN F=F*(RND(1.5))
1180 R=R+(INT(R/(RND(9))))
1190 RETURN
1200 IFD=0THEN 1220
1210 GOTO1200
1220 CLS
1230 PRINT"************************************"
1240 PRINT" THE KINGDOM OF GHELLINGE":PRINT"  ***************************":PRINT:
1250 PRINT"YOU ARE THE RULER OF A SMALL   ":PRINT"KINGDOM.YOU CONTROL THE LOCAL"
:PRINT"WORKFORCE AND THE ARMY.":PRINT:PRINT"DISTRIBUTE THE POPULATION":PRINT"BET
WEEN THE DYKE,FARMERS,GUARDS":PRINT" AND THE ARMY.":D=1
1260 PRINT"************************************"
1270 FORT=1TO200 STEP20:SOUNDT,3:NEXTT
1280 FORA=1TO3000:NEXTA
1290 RETURN
1300 CLS:PRINT@74,"YOUR PEOPLE HAVE "
1310 PRINT@106,"BEEN WIPED OUT."
1320 FORT=1TO250STEP25:SOUNDT,3:NEXTT
1330 FORA=1TO1500:NEXTA:CLS
1331 W=Y
1332 PRINT:PRINT" YOU REIGNED FROM":PRINT"      1134 UNTIL ";W
1340 PRINT:PRINT:PRINT"ANOTHER GO?(Y/N)"
1350 A$=INKEY$:IF A$=""THEN 1350:IFA$="N"THEN END
1360 IF A$="Y" THEN 40
1370 IF A$<>"Y" AND A$<>"N" THEN1350
1380 END
1390 CLS:PRINT@74,"YOU DIED OF OLD AGE"
1400 FORT=1TO250STEP25:SOUNDT,4:NEXTT
1410 GOTO1340
1420 CLS5:POKE1226,128:POKE1357,128:POKE1290,128:POKE1350,128:FORP=1025 TO1536 S
TEP32:POKEP,175:NEXTP:FORP=1026TO1537 STEP32:POKEP,175:NEXTP
1430 FORP=1025 TO1536 STEP32:POKEP,171:POKEP,175:POKEP+32,171:POKEP+32,175:NEXTP
1440 FORP=1049TO1528STEP64:POKEP,111:NEXTP:FORP=1050 TO1529STEP64:POKEP,92:NEXTP
:FORP=1052TO1531 STEP64:POKEP,111:NEXTP:FORP=1053TO1532STEP64:POKEP,92:NEXTP
1450 FORN=1217TO(1219+RND(11))STEP1:POKEN,175:NEXTN:FORT=1313TO(1318+RND(9)) STE
P1:POKET,175:FORT=1281TO(1282+RND(8)):POKET,175:NEXTT:FORT=1345TO(1348+RND(8)):P
OKET,175:NEXTT
1460 OY=(5+RND(89))
1470 OB=0
1480 F=F*(RND(3))
1490 R=R-(OF+OY+OB)
1500 IFR<2 THEN 1300
1510 GOTO80
1520 F=F*(RND(5))
1530 R=R+(INT(R/(RND(4))))
1540 GOTO70
```

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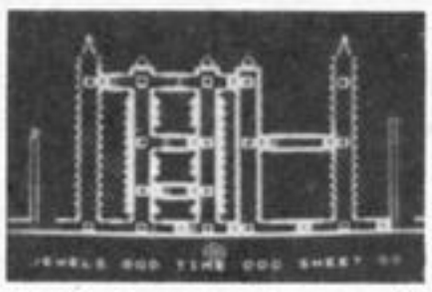

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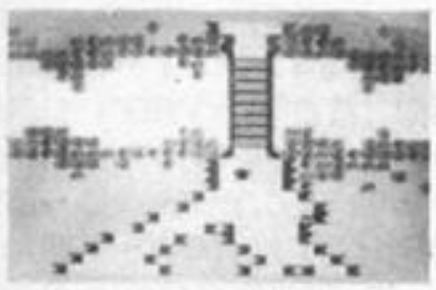

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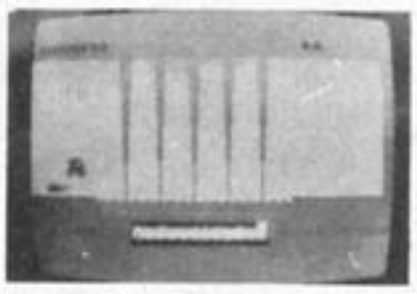

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Don't knock games

I am writing to complain about all the letters that have been published in HCW lately criticising people who are dedicated games players.

There is nothing wrong with using your computer solely for playing games. That's what I use my Commodore 64 for and I'm not ashamed to say it.

I'm fed up with all this stupid snobbery. I don't want to spend my evenings studying on my computer. When I've finished my homework then my time is my own and I can do whatever I like.

If I want to 'waste' my time playing games on my computer then that's entirely up to me. There's plenty of educational software about for all those goody goody people to buy if they want. If they want to go and use French revision programs when they've finished their French homework then let them. I'd be the last person to criticise them for it.

I just wish that they would mind their own business instead of taking on this high and mightly attitude about micros. I don't try and tell people what books they should read or what records they should listen to. I don't think anyone has the right to dictate to me what type of software I buy for my computer.

John Richardson, Bath

Long odds

I have just bought a Commodore 64 and it is running perfectly. The other day while going through some past magazines, I came across some letters in HCW 57. I was very disappointed to learn how some people have experienced faulty 64's.

The letter which shocked me the most was the one from S Blease, Stretford, Manchester. S Blease had been unsuccessful with no less than **eight** 64s in approximately four weeks.

If we assume that out of every four Commodores which are sold, one is faulty, (if this is really the case, then Commodore should close down immediately) the chance of getting problems with eight successive 64s is 1 out of 4 to the power of 8. (Of course, I have assumed that S Blease has had eight faulty 64s successively.)

You might say that this is intolerable and it could happen to many people again. But just imagine that 4 to the power of 8 is equal to 65536, which is exactly the same number of bytes as the Commodore 64 has. Now you can see how difficult it is to be as unlucky as S Blease.

I really feel sorry for him and hope that no one else ever experiences such bad luck.

Hemant Heeramun, Mauritius

Stop moaning

I am writing to HCW because I am fed up of reading letters complaining about people cheating, like the one from Henry O'Donovan of Torquay (HCW 86).

I love playing adventure games and am a dedicated fan of games like The Hobbit. I think that it is a very good idea for readers to swap ideas and solutions to this type of game.

The games are quite expensive and when you have saved up several weeks' pocket money to buy one it can be really frustrating to get completely stuck when you haven't even completed half the game!

Please, please HCW don't neglect adventure fans. I have had many helpful tips from the letters page and I hope I will be able to rely on HCW readers for more such help in the future.

Steven Horton, Blackpool

Adventure players need not despair. We will be starting an adventure help line in the near future so please continue to send your problems and solutions to us.

Thumbs down

"What's this?" I thought to myself as I looked through my copy of HCW. "No TI program, again!"

What's happened to you HCW? You used to be a great supporter of this machine, but now it seems, you have joined with most other magazines and abandoned the TI-99/4A.

But then, I thought, it might not be HCW's fault. It could be because nobody is sending any programs in, or that the programs that are being sent in are not up to standard.

So I'll just have to write a program myself and send it to HCW.

The TI-99/4A is a good computer, so let's have some more support for it.

N Newell, Abergavenny

You're right, Mr Newell. We try and cater for the whole range of popular home computers but we need good reader submissions. If you have a program which you think is good enough to be published please send it to us.

Spoilt for choice

I am considering getting a computer but am at a loss. All the computers are quite expensive so I do not wish to waste money on a poor computer.

My friend tells me to get the 48K Spectrum but I dislike the keyboard. There are a few other computers but those are too expensive. There is one computer (Commodore 16) which is in the right price range but I know very little about it. Would any HCW reader be able to help me with this problem?

David Balmer, Falmouth

Mr Angry of Leeds

I bought my weekly HCW as usual, on the 30th October (issue 86). Seeing as there were no programs my TI-99/4A I flicked to the letters page.

Now for the two As and an O. I was Astounded, Appalled and Outraged when I read Henry O'Donovan's letter about the Spectrum and the 99/4A. It appears to me that Henry is an idealist when he starts waffling about the Spectrum being a **brilliant** machine in his letter.

If you ask me, I think Sir Clive has churned out a load of **beeeep** which is only good for playing games on. When Henry starts gabbing about **balance** in HCW I agree with him, the TI-99/4A should have more than the Spectrum. I mean, nearly every week there is a program for the Spectrum, but never a program for the Texas. Not even a tip on the Hint and Tips page.

Don't start waffling about nobody sending programs in to HCW for the Texas because I have already sent four, one of which Parco Electronics were going to publish.

I am only 11 years old, but I don't care if Henry is six or 96 years old. If I have something to say about somebody, I say it!

So Henry, (or any other dummy in the country) please don't send any more untruthful letters, or you may get one like this addressed to you!

John Rogers, Leeds

Sporting casualty

I am writing to complain about some of the software being written especially Olympic games — Activision's Decathlon and Ocean's Daley Thompson and any other game which uses rapid right and left movement of the joystick.

Surely anyone using their joystick must know the strain that is put on it. Eventually, while enjoying playing Activision's Olympics, the javelin thrower threw miles before the line thus one broken joystick.

I was thinking of writing to Activision and Ocean but decided to put my views to you.

I'm not complaining about the actual games: the graphics are stunning. It's the controlling of the games which annoys me

By the way, could anyone tell me if any company does repairs to Quickshot 2 joysticks. I would also like to say your magazine is the best around, if a bit thin lately. I own a Commodore 64.

David King, Bootle

Help the poor souls

I would like to congratulate HCW on the increasingly high standard of the magazine, especially over the last couple of weeks.

One thing I would like to see in the magazine is some more informative articles. I am very interested in programming but unfortunately I am not yet very good at it, in fact I am terrible.

I have been buying HCW for many months and I have rarely seen anything which is aimed at the programmer who is a complete beginner. Would it be possible for HCW to run a series on either learning BASIC or machine code? I'm sure that the HCW experts, with all their experience, would be able to provide a great deal of help for us poor souls who are less gifted.

I really feel that HCW would find such articles very appealing to the majority of readers. I like to think that I use my computer to the best of my abilities. (I own a Spectrum 48K.) However I feel that I am missing out by not being able to write good programs.

I have bought books on the subject but, as many readers will know, it takes an awful lot of self discipline to sit down and actually read and understand them even before you try and put what you have learnt into practice.

I think that I would achieve more if I was able to follow a series in a magazine because then I would have a whole week to learn and perfect new techniques while waiting for the next issue.

I am not criticising HCW because I feel that it is a very good magazine which caters well for most readers. However there is always room for improvement and I think that programming is an area which is very much neglected by the majority of magazines.

Carol Reagan, Glasgow

Software winner

Readers will be pleased to hear that programming articles of all kinds will be a regular feature in HCW from now on. If anyone has other ideas about what should be included in HCW we will be very pleased to hear them.

Send your letters to Letters, Home Computing Weekly, No.1 Golden Square, London W1R 3AB. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address.

Can you count? Oric 1 £3.95

Mellowsoft, 23 Dalford Ct, Hollinswod, Telford, Shropshire

Can you count? is an educational game for four to six year-olds by a new company called Mellowsoft.

As soon as the program starts to load, you notice that it's special. This program actually has a title page. You may think this is trivial but these days, presentation is almost as important as the program itself.

When the main program is loaded the child is presented with three choices; a trip to the town, country or seaside. When one is chosen, the appropriate picture is drawn. The child is asked to count the number of objects. For example, if you chose option one, you may be asked to count the number of blue cars, or in the case of choice two, the number of sheep.

This may sound like other educational software but what makes this particular program head and shoulders above the rest is its presentation. The meticulous attention to graphical detail, the three-part harmony music and the small but important details such as a number input routine which doesn't require RETURN make this a very professional program. **S.S.**

instructions	50%
ease of use	90%
display	100%
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Can you Spell? Oric 1 £3.95

Mellowsoft, 23 Dalford Court, Hollingswood, Telford, Shropshire

Can you Spell is an educational game for four to six-year-olds by a relatively new company called Mellowsoft.

When the main program is loaded, a large picture of a train is drawn to attract the child's attention. Then a three-part harmony tune is played until you intervene. The screen set up is of a factory with a small but very carefully designed truck at the right hand edge and a crane at the top. Then a very detailed picture of an everyday object is drawn at the to right hand corner.

The child is then asked to move a space invaders-type base and shoot the appropriate letter for the name of that object. If the choice is correct the truck collects the letter and delivers it to the crane which in turn moves to a box. This is done for each letter and thus the name of that object is slowly built up.

This may sound like any other spelling game but this one is rather special. The quality of graphics and tunes played are superb and should help to keep the wandering attention of a young child. **S.S.**

instructions	60%
ease of use	90%
display	100%
value for money	95%

★★★★

Junior Maths Pack Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

If you are looking for a program that gives practice in some of the important areas of maths at a junior level you could do a great deal worse than take a peek at this package.

The program actually loads three games all of which can be selected from the main menu.

The first is a lunar lander game, requiring speed of multiplication or division to halt the craft in its descent. You set the speed and difficulty and try to keep the craft off the ground by answering questions as quickly as possible.

The second game uses grids and co-ordinates to search for treasure. There are a number of varieties of treasure and help, in the form of arrows, if you require it. A good program but this type can be done very easily on paper too.

The final game is based on the fruit machine and involves the testing of number bonds. The reels spin and you add or subtract numbers from the totals shown to try to make the reels match. All the programs are basic but adequate. **D.C.**

instructions	75%
ease of use	80%
graphics	65%
value for money	75%

★★★

Learning at home

Use your computer as an educational tool. These new software releases have been specially vetted for you

French on the Run BBC £9.95

Silversoft, renouned for games software has brought out this educational game for 'O'-Level French students. As expected, it uses multiple-choice type questions, in the form of an adventure game.

The instructions claim that this game tests your grammatical structure, vocabulary, idiomatic phrases, comprehension and basic knowledge of French. The questions used address themselves to the most grammatical and lexical errors made by students at 'O'-Level.

This is the scenario: you are a British war-time pilot shot down over occupied France. You are taken captive and subsequently escape. In your efforts to make your way back to Blighty your only contact is with the local people who unfortunately speak nothing but French.

The game consists of four sections which are of increasing linguistic difficulty. On each route, you come up against situations (meeting people, buying things etc) in which you have to reply to questions in French or carry out actions described in French. You have to try and pass as a Frenchman.

The whole story is quite well thought out and the questions are interesting but not silly. I felt that the slow text output speed was irritating but that does not stop me from recommending this game. **S.S.**

instructions	90%
ease of use	80%
display	65%
value for money	70%

★★★★

European Knowledge Electron £6.95

Micro Power, Sheepscar Hse, 15 Sheepscar St South, Leeds LS7 1AD

Educational software for the Electron is rare even now. This is a straightforward package to test the knowledge of youngsters in a variety of areas connected with Europe.

Using the excellent graphic capabilities of the Electron the main screen shows a multi-coloured map of Europe with good accuracy and an attractive appearance.

The screen is then divided into three sections. The four possible answers and the third an enlarged map of the country with better defined boundaries and a pointer to the main map.

The questions, chosen at random, are presented in sets of four per country. They usually start with the name of the country and then branch out into a number of questions. The capital might be requested, the name of a famous person from the country, the language or currency and even the names of large towns.

This variety is one of the notable features of this game and tends to make it much less boring. A good rote learning program with few frills but of a good, solid, standard. **D.C.**

instructions	75%
ease of use	95%
graphics	95%
value for money	90%

★★★★

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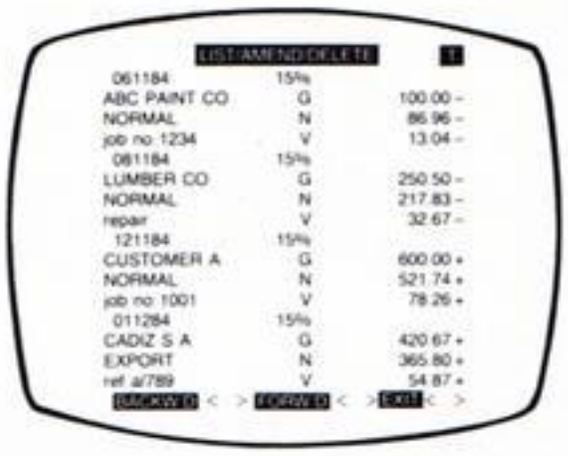

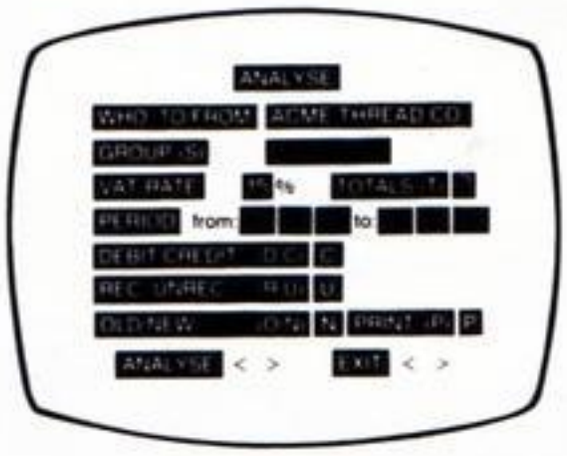

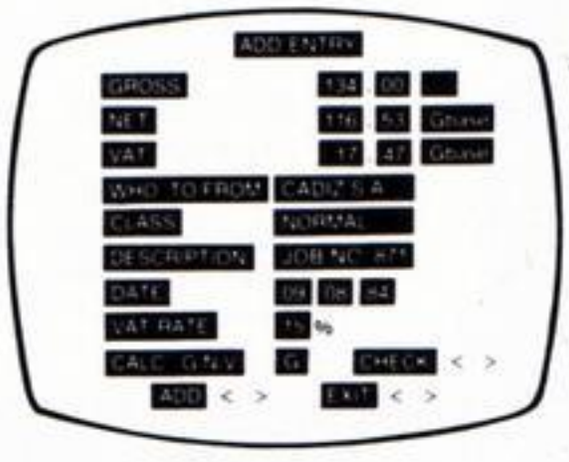

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3	Monty Mole	Gremlin Graphics	Spectrum (4)
4	Manic Miner	S Project	Spectrum (-)
5	Beach-Head	U.S. Gold	Spectrum (3)
6	Combat Lynx	Durell	Spectrum (5)
7	Pyjamarama	Mikro-Gen	Spectrum (5)
8	Kokotoni Wilf	Elite	Spectrum (8)
9	Danger Mouse / Double Trouble	Creative Spks	Spectrum (-)
10	Zaxxon	U.S. Gold	CBM 64 (9)

NON-ARCADE

1	Elite	Acornsoft	BBC (1)
2	American	Mind Games	Spectrum (4)
3	Tir Na Nog	Gargoyle	Spectrum (-)
4	Avalon	Hewson	Spectrum (-)
5	Scrabble	Leisure Genius	Spectrum (-)
6	Twin Kingdom Valley	Bug-Byte	Spectrum (3)
7	Sherlock	Melbourne Hse	Spectrum (2)
8	World Cup Football	Artic	CBM 64 (10)
9	Hampstead	Melbourne Hse	Spectrum (5)
10	All or Nothing	Abbex	Spectrum (7)

Compiled with the assistance of Britain's leading software distributors, including: Pinnacle, SDL, PCE, Websters, PCS and Software Centre.

SPECTRUM

1	Eureka	Domark (-)
2	Daley Thompsons Decathlon	Ocean (1)
3	Select 1	Computer Rcds (-)
4	Beach-Head	Centresoft (-)
5	Steve Davis Snooker	CDS (-)
6	Matchpoint	Sinclair (9)
7	Jump Challenge	Martech (-)
8	Automania	Mikro-Gen (-)
9	Jet Set Willy	S Projects (-)
10	Tornado Low Level	Vortex (4)

COMMODORE 64

1	International Soccer	CBM (-)
2	Eureka	Domark (-)
3	Select 1	Computer Rcds (-)
4	Danger Mouse	Creative Sprks (-)
5	Spitfire Ace	Centresoft (10)
6	Stunt Bike	Ocean (-)
7	Jet Set Willy	S Projects (-)
8	Return to Eden	Level 9 (-)
9	Chiller	Mastertronic (-)
10	Cluedo	Leisure Genius (7)

DRAGON 32

1	Hunchback	Ocean (1)
2	Chuckie Egg	A & F (4)
3	Hungry Horace	Melbourne Hse (-)
4	Mr Dig	Microdeal (2)
5	Cuthbert in Space	Microdeal (5)
6	Kriegspiel	Beyond (6)
7	Dragon Chess	Oasis Software (7)
8	The King	Microdeal (-)
9	Ring of Darkness	Wintersoft (8)
10	Bug Diver	Mastertronic (-)

Compiled by W. H. Smith and Websters. Figures in brackets are last week's positions.

VIC-20

1	Computer War	Creative Spks (4)
2	Duck Shoot	Mastertronic (3)
3	Snake Bite	Firebird (-)
4	Mickey the Bricky	Firebird (-)
5	Snooker	Visions (9)
6	Bewitched	Beau Jolly (10)
7	Flight 015	Craig Comms (1)
8	Max	Anirog (4)
9	D Maze	Mastertronic (-)
10	Sub Hunt	Mastertronic (-)

BBC

1	Elite	Domark (5)
2	Jet Pac	Ultimate (9)
3	Acid Drops	Firebird (-)
4	Bird Strike	Firebird (-)
5	Mini Office	Database (7)
6	Castle of Gems	MRM (4)
7	Gold Digger	Firebird (-)
8	Duck	Firebird (-)
9	Fortress	Pace (-)
10	Battle Tank	Superior (-)
10	Frak	Aardvark (3)

AMSTRAD

1	Roland on the Ropes	Amstrad
2	Harrier Attack	Amstrad
3	Monster Chase	Romik
4	Code Name Matt	Amsoft
5	Star Commando	Terminal
6	Hunter Killer	Amsoft
7	Chess	Amstrad
8	Roland in the Cave	Amstrad
9	Admiral Graf Spee	Amstrad
=	Roland goes Digging	Ampalsoft

The joke's on you!

We're giving away 50 bumper computing books to the senders of the funniest joke this week. They don't have to be original: just witty — and clean, of course

THIS WEEK is a complete departure from our usual competition format, with a special chance for you to show us just how witty and amusing you can be.

And we're also giving away different prizes: you can win a bumper computer book for your particular machine. Learn how to program, or find out more about graphics — there's something for everyone, and as far as is humanly possible, we'll try to match the prize to the reader.

What you have to do is to send us your favourite joke. Here's one of our current favourites:

How do you know when Wally Week has been using the word processor?
He leaves Tipp-Ex on the screen

You're at liberty to choose your subject matter, although obviously computer jokes will attract our attention, and they must all be printable! So no obscenities please, or other smut.

We're looking for funny jokes or witty short anecdotes. Now's your chance to show the rest of the world just how keen your sense of humour is — and we'll be publishing the best in a special feature. Don't worry if they're very corny: as long as they raise a giggle, that's all we want.

Here's a joke to get you in the mood:

Why did the man put six worms in his mouth?
Because he loved chewing Wriglys

Perhaps you think you can do much better than that. Well, we're waiting to hear from you — and remember, computer jokes will win bonus points and go high on our list of priorities.

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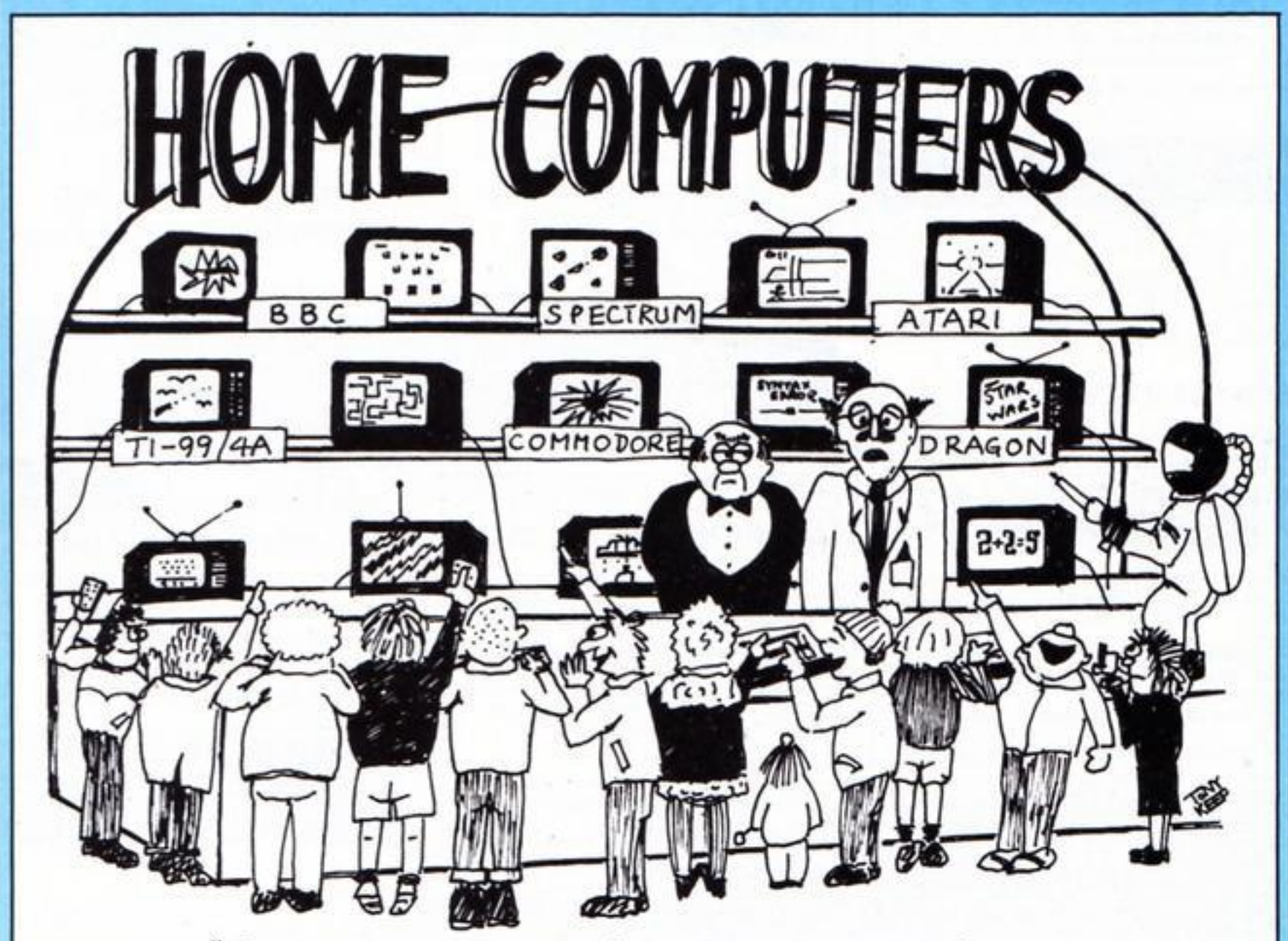

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The competition will be judged by HCW editorial staff, and their decision will be final. The 50 winning jokes, plus any additional ones will be published in a later edition of Home Computing Weekly.

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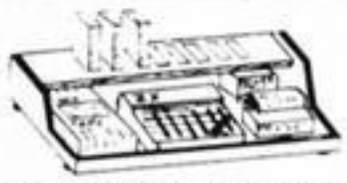

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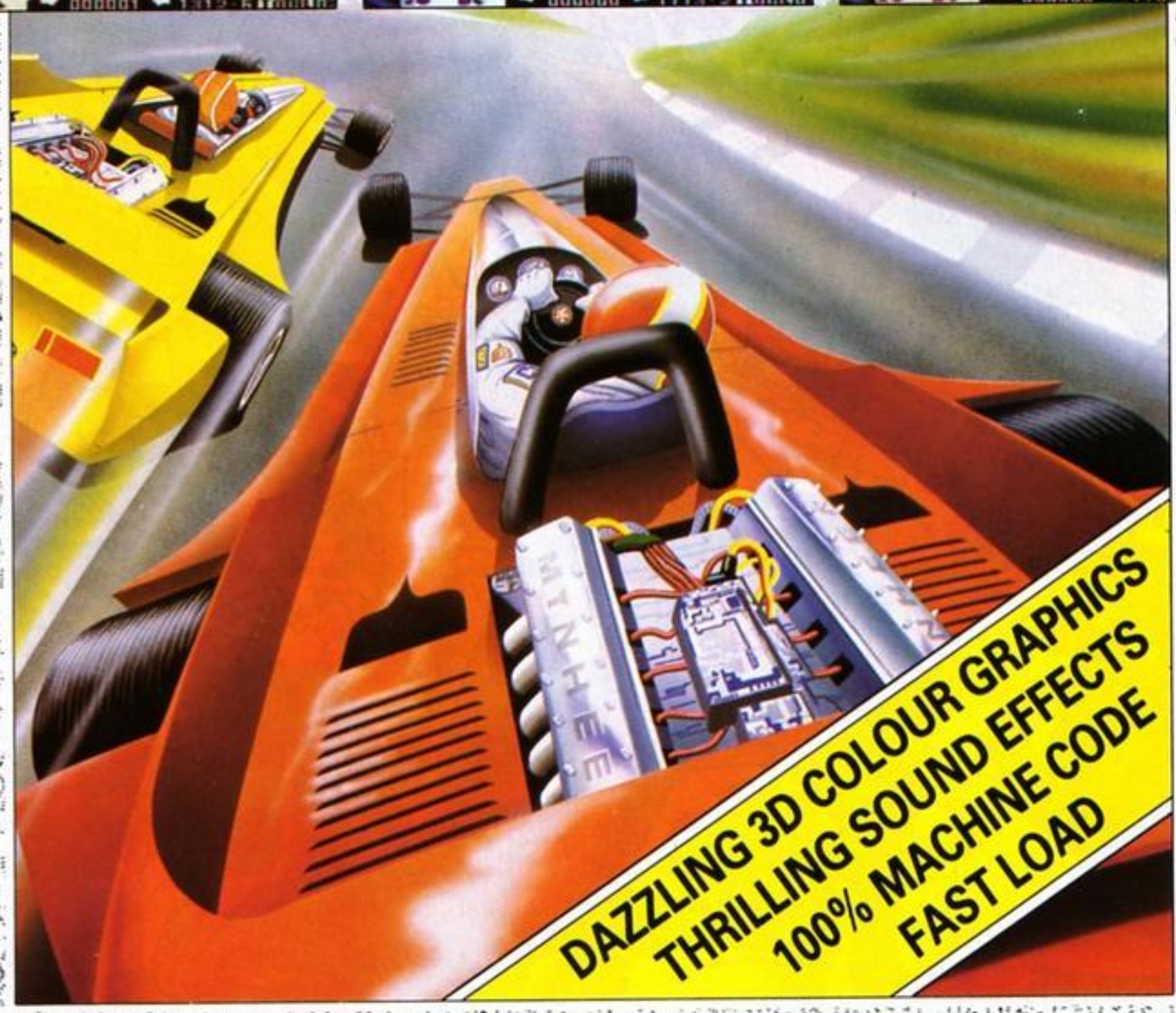

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